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PART B

SOLAR - GEOPHYSICAL DATA

ISSUED

OCTOBER 1965

U. S. DEPARTMENT OF COMMERCE

ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION

INSTITUTE FOR TELECOMMUNICATION SCIENCES AND AERONOMY

(FORMERLY CENTRAL RADIO PROPAGATION LABORATORY)

BOULDER, COLORADO

ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
INSTITUTE FOR TELECOMMUNICATION SCIENCES AND AERONOMY
(FORMERLY CENTRAL RADIO PROPAGATION LABORATORY)
BOULDER, COLORADO

SOLAR - GEOPHYSICAL DATA

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The descriptive text was republished in November 1964. Addenda have been given in the introduction to each of the CRPL-F Part B reports, December 1964 through September 1965.

Solar Flares:

The more complete listing of solar flares for June 1965 which would normally appear in this issue will be published in the next issue. Data from several observatories were not received in time for publication.

Ionospheric Effects -- SFD:

In order to better explain the SFD portion of the Ionospheric Effect of Solar Flares Table the following two sentences should be added to the first paragraph on page 14 of the November 1964 Descriptive Text:

The SFD column gives the largest frequency deviation observed, for the various paths and frequencies used, during a given event in tenths of a cycle per second (i.e. 014 = 1.4 cycles per second).

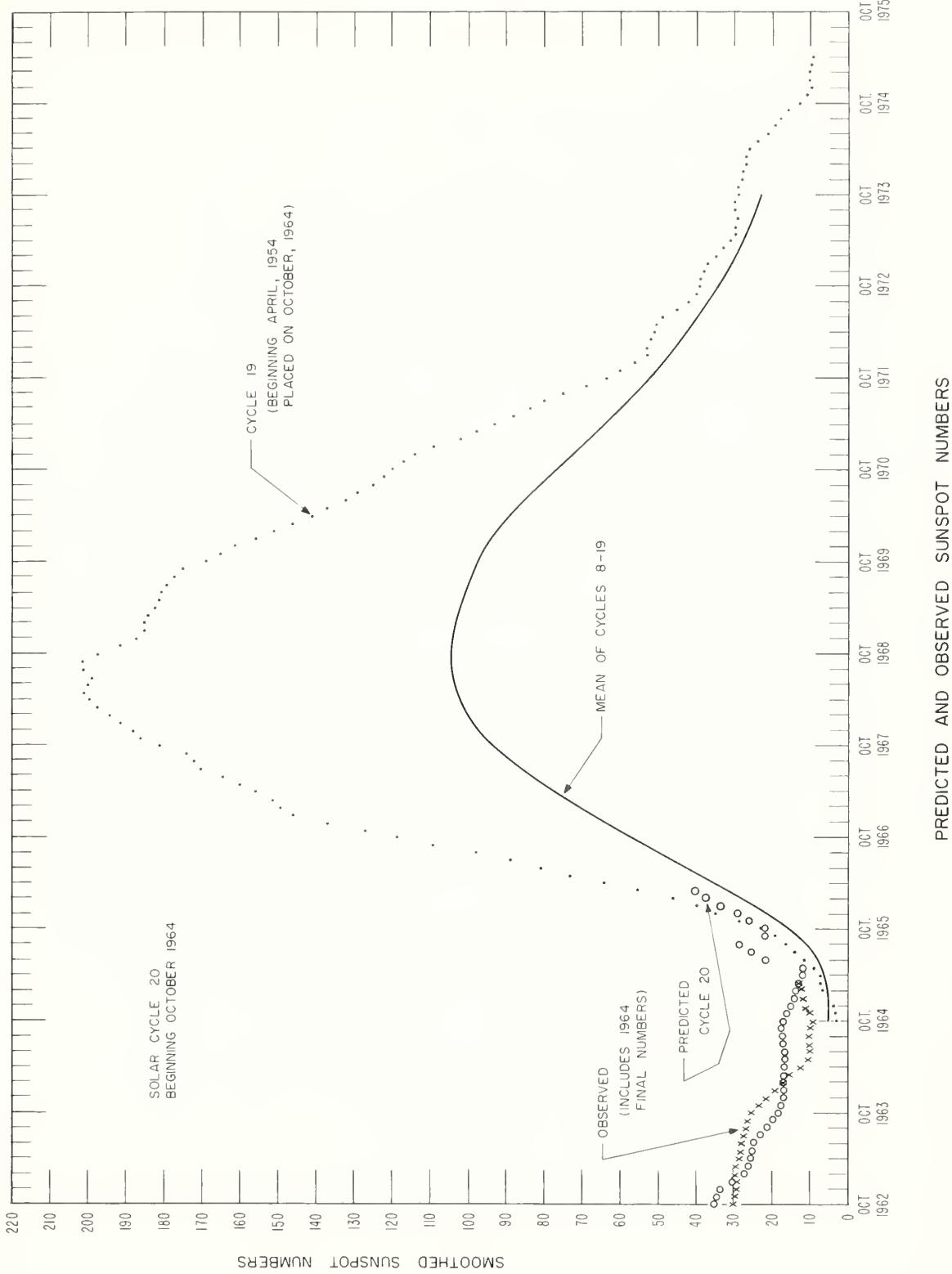
The transmitter locations are: WWV = Beltsville, Maryland; WWVH = Maui, Hawaii; KKE = Sunset, Colorado; MN = Monrovia, Liberia.

DAILY SOLAR INDICES

August 1965		American Relative Sunspot Numbers R _A	
1	0		
2	0		
3	7		
4	2		
5	0		
6	0		
7	7		
8	6		
9	9		
10	10		
11	10		
12	14		
13	1		
14	1		
15	0		
16	0		
17	0		
18	3		
19	1		
20	2		
21	0		
22	0		
23	0		
24	0		
25	0		
26	3		
27	16		
28	12		
29	3		
30	12		
31	19		
Mean:		4.5	

Sept. 1965	Zürich Provisional Relative Sunspot Numbers R _Z	Daily Values Solar Flux at 2800 Mc, Ottawa, Canada		
		S	Flux	S _A
1	17	75.4	76.8	
2	20	75.9	77.3	
3	21	76.6	77.9	
4	22	76.7	78.0	
5	22	78.7	80.0	
6	19	77.1	78.3	
7	23	77.7	78.9	
8	22	78.6	79.8	
9	18	76.1	77.2	
10	15	75.6	76.7	
11	19	75.7	76.7	
12	17	75.3	76.3	
13	17	75.0	75.9	
14	8	75.2	76.1	
15	8	74.9	75.7	
16	10	73.7	74.5	
17	8	73.8	74.5	
18	9	73.0	73.7	
19	7	72.8	73.4	
20	0	72.8	73.4	
21	0	72.5	73.1	
22	0	71.2	71.7	
23	11	71.8	72.3	
24	17	76.1	76.6	
25	13	75.8	76.2	
26	17	77.0	77.4	
27	18	78.4	78.7	
28	23	80.5	80.8	
29	37	87.3	87.6	
30	52	89.0*	89.3*	
Mean:		16.3	76.3	77.2

* Corrected for burst



CALCIUM PLAGE AND SUNSPOT REGIONS

SEPTEMBER 1965

SEPT. 1965	LAT.	MCMATH PLAGE NUMBER	RETURN OF REGION	CALCIUM PLAGE DATA					SUNSPOT DATA	
				CMP VALUES		HISTORY	AGE (ROTA- TIONS)	DATE FIRST SEEN	CMP VALUES	
				AREA	INT.				AREA	COUNT
1.2	N39	7964	New	(100)	(1.5)	b \ d	1	8/27	4	
1.7	S36	7970(1)	New	200	1.0	b - d	1	9/1	1	
5.4	N36	7974	New	(100)	(1.5)	b - d	1	9/3	2	
5.7	S29	7969	7931	500	1.0	b \ d	2	8/30	9	
6.2	N25	7975(3)	7932	400	1.5	b - d	2	<9/5	> 2	
7.1	S32	7979(1)	New	(200)	(1.5)	b - d	1	9/9	1	
7.1	N27	7980(1)	New	(200)	(1.5)	b - d	1	9/9	1	
8.2	N28	7971(2)	New	1400	3.0	b \ l	1	9/1	14	100
8.4	S04	7973(1)	New	(200)	(1.5)	b - d	1	9/3	1	26
9.2	N36	7976	New	(500)	(2.0)	b - d	1	9/5	9	10
9.2	N27	7978(1)	New	(100)	(2.0)	b - d	1	9/7	1	
9.7	N24	7977(1)	New	(100)	(2.0)	b - d	1	9/5	1	
12.0	S20	7987(1)	New	(100)	(1.5)	b - d	1	9/14	1	
12.2	S41	7988(1)	New	(300)	(1.5)	b - d	1	9/14	1	
13.3	N22	7981	New	100	1.0	b \ d	1	9/10	4	
14.7	S06	7984(1)	New	(100)	(1.5)	b - d	1	9/12	1	
15.0	N26	7990	New	(700)	(1.0)	b \ l	1	9/18	3	
15.7	N25	7982(1)	New	(200)	(1.5)	b - d	1	9/11	1	
15.8	N28	7986(1)	New	(100)	(1.5)	b - d	1	9/13	1	
16.4	N16	7985(1)	New	(100)	(1.5)	b - d	1	9/12	1	
18.1	N25	7983	7962	1800	3.0	b \ l	2	9/11	14	10
21.1	N36	7994	New	(100)	(2.0)	b - d	1	9/23	2	
21.5	N26	7995	New	(500)	(3.5)	b / l	1	9/23	5	(20)
21.9	N05	7996(1)	New	(100)	(1.5)	b - d	1	9/23	1	(10)
22.0	N29	7989(4)	7956	1600	1.5	b \ l	2	<9/17	>12	b / l
22.3	N12	7993(1)	New	100	2.0	b - d	1	9/22	1	
22.3	N12	8001(1)	New	(200)	(2.0)	b - d	1	9/25	1	
23.8	N41	7997(1)	New	100	2.0	b - d	1	9/23	1	
24.3	N22	7991	New	(100)	(1.0)	b - d	1	9/19	3	
25.2	N26	8007(1)	New	(100)	(1.0)	b - d	1	9/27	1	
26.0	N06	7992	7968	(400)	(2.0)	b - d	2	9/19	12	
29.2	N31	8003	New	200	1.5	b \ d	1	9/27	4	(10)
29.4	N34	7998(1)	New	(200)	(1.5)	b - d	1	9/24	1	(2)
29.5	N05	7999	New	(100)	(1.5)	b - d	1	9/24	2	b - d
30.1	N18	8000	New	(200)	(1.0)	b - d	1	9/24	2	
30.2	N11	8011	New	(100)	(1.5)	b - d	1	10/3	1	

(1) These small and ephemeral plages were seen on the disk for only one day.
 (2) Region 7971 is a new plage which has developed near the position of plage 7932 of the previous rotation.
 (3) Region 7975 contains the remnants of region 7932.
 (4) Region 7989 is primarily a return of plage 7956 of the previous rotation although part of 7989 also contains weak remnants of old plage 7958.

No calcium plage observations were secured at the McMath-Hulbert Observatory on September 8, 16 and 26, 1965.

SEPTEMBER 1965

SEPT. 1965	TIME MEAS. UT	LAT.	MER. DIST	TYPE	No.	SEPT. 1965	TIME MEAS. UT	LAT.	MER. DIST.	TYPE	No.
1	2200	N25 N02	W32 W35	αp βp^{**}	15951 15952	15	1435	N23	E29	αp	15955
2	2345	N02 N26	W50 E66	βp^{**} αp	15952 15953	16 17-19	1430 No Obs.	N23	E16	αp	15955
3	No Obs.					20	2345	N24	W38	αp	15955
4	0040	N03 N25	W65 E56	βp^{**} βf	15952 15953	21-22	No Spots				
5-7	No Obs.					23	2000	N25	W31	βp	15956
						24	1435	N25	W42	βp	15956
8	1620	N26	W08	βp	15953	25	No Obs.				
9	1700	N26 N33	W21 W09	βp αf	15953 15954	26	1645	N26 N19	W74 E79	αp αp	15956 15957
10	2205	N26	W37	βp	15953	27	1615	N18 N32 S28	E70 E19 E79	βp βp αf	15957 15958 15959
11	No Obs.										
12	0040	N26 N24	W55 E76	αp αf	15953 15955	28	No Obs.				
13	0025	N25 N24	W68 E64	αp αf	15953 15955	29	1615	N21	E44	$\beta \gamma$	15957
14	0000	N26 N24	W80 E50	αp αp^{**}	15953 15955	30	No Obs.				
14	2355	N23	E37	αp	15955						

* Old cycle (19)

** Two previous observations affected by limb proximity

PROVISIONAL CORONAL LINE EMISSION INDICES

SEPTEMBER 1965

The Coronal Indices will be published at a later date because the microdensitometer is undergoing repairs.

SOLAR FLARES

SEPTEMBER 1965

IIIa

OBSERVATORY	DATE SEPT 1965	OBSERVED UNIVERSAL TIME			APPROX LAT. MAG. DIST.	LOCATION MCMATH REGION	DURA- TION MINUTES	IM- POR- TANCE	MEASUREMENTS			REMARKS		
		START	END	MAX PHASE					TIME	MEAS AREA Sq. Deg.	OBS. COND TIME U.T.			
KAND	01	0912	0922	1112	N27 E90 N30 E90 N32 W24 N32 W90	7971 7971 7968 7958	1- 1- 1- 1-	2 P	2206	•20				
KAND	01	1053	1107	1355 D	N04 W42 N05 W42 N13 W44 N02 W48	7968 7968 7968 7968	1- 1- 1- 1-	1 C 1 C 2 C 2 P	1245 1347 1513 1630	•35 •70 •35 •30	•40 •80 •41 •40	H H D D		
HALE	01	2202	E	2232 D	2206									
OTTA	02	1239	1254	D	N04 W42 N05 W42 N13 W44 N02 W48	7968 7968 7968 7968	1- 1- 1- 1-	1 C 1 C 2 C 2 P	1245 1347 1513 1630	•35 •70 •35 •30	•40 •80 •41 •40	H H D D		
OTTA	02	1343	E	1355 D	1513									
OTTA	02	1511	1523	E	1628 E	1653	1630							
MCMA	02	1628	E	1725	1725									
HUAN	02	1715	E											
LOCK	03	1647	1706	1652	N26 E56 N27 E62 N27 E63 N27 E61	7971 7971 7971 7971	1- 1- 1- 1-	2 C 2 C 2 C 1 P	1652 1653 1656 2100	•30 •47 •50 •30	•50 •72 •10 •60	20	F	
OTTA	03	1649	E	1654 D	1653									
MCMA	03	1651	E	1710	1712 D									
MCMA	03	2100												
WEND	04	0552	E	0723 D	N29 W63 N27 E49	7961 7971	1+ 1-	2 C	1800	•30	•50	E		
MCMA	04	1759	E	1814										
MAN1	05	0030	E	0055	0048	N26 E40 N26 E39 N26 E39 N26 E39	7971 7971 7971 7971	1- 1- 1- 1-	2 2 2 2	0048 0225 0407 0426	•40 •80 •40 0426	•50 •96 •50 •36		
MAN1	05	0210	E	0312	0225	N26 E39 N26 E39 N26 E39 N26 E38	7971 7971 7971 7971	1- 1- 1- 1-	2 2 2 2	0225 0407 0407 0456	•40 •40 •40 •25	•50 •50 •50 •26		
MAN1	05	0403	E	0425	0407	N26 E36 N26 E36 N26 E36 N26 E38	7971 7971 7971 7971	1- 1- 1- 1-	2 2 2 2	0407 0426 0426 0515	•40 •30 •30 0515	•50 •50 •50 •60		
MAN1	05	0433	E	0443	0436	N35 E03 N35 E03 N35 E03 N36 E06	7975 7975 7975 7975	1- 1- 1- 1-	2 2 2 3	0456 0456 0456 0609	•25 •25 •25 0609	•60 •60 •60 190	CGH	
MAN1	05	0455	E	0515	0515	N26 E38 N26 E38 N26 E38 N26 E39	7971 7971 7971 7971	1- 1- 1- 1-	2 2 2 3	0515 0515 0515 0815	•50 •50 •50 •90	•60 •60 •60 190	CGH	
CAPS	05	0509	E	0528	0515	N26 E06 N26 E06 N26 E06 N26 E39	7975 7975 7975 7971	1- 1- 1- 1-	2 2 2 3	0609 0609 0609 2034	•60 •60 •60 2034	•60 •60 •60 190	D	
WEND	05	0609	E	0616	0616	N26 E39 N26 E39 N26 E39 N26 E37	7971 7971 7971 7971	1- 1- 1- 1-	2 2 2 2	0758 0758 0758 0815	•20 •20 •20 •90	•30 •30 •30 190	D	
KANZ	05	0742	E	0756 D	0756 D	N28 E43 N26 E42 N26 E40 N26 E40	7971 7971 7971 7971	1- 1- 1+ 1-	2 2 2 2	0815 0815 0815 40 D	•90 •90 •90 1+•30	•90 •90 •90 190	D	
CAPS	05	0745	E	0755 E	0745 E	N28 E43 N26 E42 N26 E40 N26 E40	7971 7971 7971 7971	1- 1- 1+ 1-	2 2 2 2	0815 0815 0815 40 D	•90 •90 •90 1+•30	•90 •90 •90 190	D	
WEND	05	0812	E	0834	0834	N26 E42 N26 E40 N26 E38 N26 E38	7971 7971 7971 7971	2.2 15 D 15 D 15 D	1+ 1+ 1+ 1+	1213 1213 1213 1213	1.06 1.90 1.90 1.06	1.18 1.20 1.20 1.18		
KANZ	05	0815	E	0836	0851 D	N03 W87 N03 W87 N03 W80 N03 W80	7968 7968 7961 7961	2.2 2.2 1- 1-	1 1 1 1	1350 1350 1350 1350	•46 •46 •46 1758	1.12 1.12 1.12 2034	180	CE
WEND	05	0836	E	0918 D	0918 D	N26 E39 N26 E39 N26 E39 N26 E37	7971 7971 7971 7971	1- 1- 1- 1-	2 2 2 2	1350 1350 1350 2034	•20 •20 •20 •30	1.12 1.12 1.12 2034	DH	
KANZ	05	0856	E	0918 D	0941	N1013 D N1755	7971 1758	1- 1-	2 2	1758 2034	•30 •30	•40 •40	D	
WEND	05	0944	E	1010 D	1010 D	N1202 D N1211 E N1345 E N1755	7971 1242 D 1222 D 1359	1- 1- 1- 1-	2 2 2 2	1213 1213 1213 1213	1.06 1.90 1.90 1.06	1.18 1.20 1.20 1.18		
KANZ	05	1046	E	1050	1050	N1202 D N1211 E N1345 E N1755	7971 1242 D 1222 D 1359	1- 1- 1- 1-	2 2 2 2	1213 1213 1213 1213	1.06 1.90 1.90 1.06	1.18 1.20 1.20 1.18		
WEND	05	1202	D	1242 D	1242 D	N1202 D N1211 E N1345 E N1755	7971 1242 D 1222 D 1359	1- 1- 1- 1-	2 2 2 2	1213 1213 1213 1213	1.06 1.90 1.90 1.06	1.18 1.20 1.20 1.18		
OTTA	06	1338	E	1401	1345	N22 E03 N22 E01 N22 E21 N22 E22	7975 7975 7971 7971	1- 1- 1- 1-	2 2 2 2	1345 1345 1345 1345	•16 •16 •16 •16	•16 •16 •16 •16		
OTTA	06	1350	E	1406	1354	N22 E01 N22 E21 N22 E22 N22 E22	7975 7975 7971 7971	1- 1- 1- 1-	2 2 2 2	1345 1345 1345 1345	•16 •16 •16 •16	•16 •16 •16 •16		
KANZ	06	1341	E	1341	1343	N22 E01 N22 E21 N22 E22 N22 E22	7975 7975 7971 7971	1- 1- 1- 1-	2 2 2 2	1345 1345 1345 1345	•16 •16 •16 •16	•16 •16 •16 •16		
CAPS	06	1341	E	1343	1344	N22 E01 N22 E21 N22 E22 N22 E22	7975 7975 7971 7971	1- 1- 1- 1-	2 2 2 2	1345 1345 1345 1345	•16 •16 •16 •16	•16 •16 •16 •16		
OTTA	06	1345	E	1345	1345	N22 E01 N22 E21 N22 E22 N22 E22	7975 7975 7971 7971	1- 1- 1- 1-	2 2 2 2	1345 1345 1345 1345	•16 •16 •16 •16	•16 •16 •16 •16		
MCMA	06	1345	E	1345	1345	N22 E01 N22 E21 N22 E22 N22 E22	7975 7975 7971 7971	1- 1- 1- 1-	2 2 2 2	1345 1345 1345 1345	•16 •16 •16 •16	•16 •16 •16 •16		
MCMA	06	1345	E	1345	1345	N22 E01 N22 E21 N22 E22 N22 E22	7975 7975 7971 7971	1- 1- 1- 1-	2 2 2 2	1345 1345 1345 1345	•16 •16 •16 •16	•16 •16 •16 •16		
MCMA	06	1605	E	1620	1610	N27 E16 N25 E12 N25 E12	7971 7971 7971	1- 1- 1-	2 2 2	1610 1610 1610	•40 •40 •40	•40 •40 •40		
HALE	06	2107	E	2119	2112	N25 E12 N25 E12	7971 7971	1- 1-	2 2	2112 2112	•10 •10	•10 •10		
HALE	06	2155	E	2200	2156	N25 E12 N25 E12	7971 7971	1- 1-	2 2	2156 2156	•10 •10	•10 •10		
HALE	06	2318	E	2323	2321	N25 E10 N25 E10	7971 7971	1- 1-	2 2	2321 2321	•10 •10	•10 •10		

SOLAR FLARES

SEPTEMBER 1965

OBSERVATORY	DATE SEPT 1965	OBSERVED UNIVERSAL TIME			APPROX. LAT. MER DIST	MEATH. PLATE REGION	DURA- TION MINUTES	IM- POR- TANCE	OBS. COND.	TIME UT	MEAS. AREA Sq. Deg.	MEASUREMENTS	MAX. WIDTH Ha	MAX. INT. %	REMARKS
		START	END	MAX. PHASE											
HALE	06	2326	2341	2331	N26	E10	7971	1-	3 C	2331	*10				H
HALE	07	0107	0116	0109	N26	E09	7971	1-	3 C	0109	*10				
KANZ	07	0955 E	1314	1312	N26	E08	7971	1-	1 C	1312	*59				L
OTTA	07	1255	1611 E	1617	N25	E05	7971	1-	1 C	1614	*53				DH
OTTA	07	1611 E	1621 U	1614	N25	E03	7971	1-	1 C	1614	*47				H
SACP	07	1640	1644 D	1644	N24	E03	7971	1-	1 C	1643	*47				
OTTA	07	1640	1705	1713 D	N26	E03	7971	1-	1 C	1643	*47				
SACP	07	1705	2003	1950	N24	E03	7971	1-	1 C	1950	*30				
LOCK	07	1940	1957 D	1947	N26	W03	7971	1-	1 C	1950	*20				F
SACP	07	1942	2036 E	1533 D	N25	W09	7971	1-	1 C	1950	*17				
WEND	08	1525 E	1528	1532	N26	W12	7971	1-	1 C	1950	*17				
SACP	08	1611	1621 U	1614	N29	W04	7971	1-	1 C	1950	*51				
SACP	08	1942	1957 D	1947	N26	W10	7971	1-	1 C	1950	*78				
SACP	08	2034	2137	2057	N25	W09	7971	63	1 C	1950	*51				
LOCK	08	2035	2129	2101	N25	W10	7971	1-	1 C	2101	*66				
HALE	08	2036 E	2055	2145	N24	W09	7971	1-	1 P	2057	*80				L
HALE	08	2324	2344 D	2328	N22	W19	7971	1-	1 C	2109	*60				
LOCK	08	2325	2355 D	2331	N23	W20	7971	1-	1 C	2328	*20				F
HALE	08	2326	2329	2329	N22	W19	7971	1-	1 C	2329	*20				
HALE	09	0034	0046	0035	N24	W15	7971	1-	1 C	0035	*40				
HALE	09	0308	0317	0312	N25	W18	7971	1-	1 C	0312	*20				F
HALE	09	0407	0411	0409	N25	W18	7971	1-	1 C	0409	*20				
HALE	09	0411	0415 D	0414	N23	W22	7971	1-	1 C	0414	*20				
MANI	09	0556	0615	0615	N27	W14	7971	1-	1 P	0603	*40				
WEND	09	0808	0822	0815	N26	W16	7971	14	1 C	1406	*58				
KANZ	09	0912 E	0923 D	0923 D	N26	W17	7971	30	D	1406	*59				
KANZ	09	0930	0935 D	0935 D	N24	W18	7971	11	D	1406	*70				
OTTA	09	1333	1443	1345	N25	W22	7971	1-	2 C	1406	*69				
SACP	09	1404 E	1418	1406	N26	W22	7971	1-	1 C	1406	*69				
KANZ	09	1409 E	1416 D	1416 D	N24	W22	7971	7	D	1406	*69				
SACP	09	1418	1439 D	1430	N25	W20	7971	1-	1 C	1629	*60				
OTTA	09	1626	1644 D	1629	N27	W27	7971	1-	1 C	1629	*23				E
SACP	09	1626	1645	1631	N25	W28	7971	1-	1 C	1632	*43				
LOCK	09	1627	1642	1632	N24	W27	7971	1-	1 C	1632	*40				
OTTA	09	1628	1655 D	1631	N25	W28	7971	1-	1 C	1631	*29				
HALE	09	1817 E	1830	1830	N25	W23	7971	1-	2 P	1817	*40				
HALE	09	1838	1921	1847	N25	W24	7971	1-	2 C	1847	*80				
OTTA	09	1837	1857	1847	N26	W25	7971	1-	1 C	1847	*24				
SACP	09	1934	1945	1938	N27	W22	7971	1-	1 C	1847	*45				
LOCK	09	2021	2032	2026	N17	W05	7971	1-	1 C	2026	*25				
LOCK	09	2109	2121	2115	N36	E78	7971	1-	1 C	2115	*10				
SACP	09	2112	2148	2132	N26	W26	7971	1-	1 C	2115	*20				
MCM	09	2132	2146	2146	N25	W22	7971	1-	2 P	2137	*20				D

SOLAR FLARES

SEPTEMBER 1965

IIIc

OBSERVATORY	DATE SEP 1965	OBSERVED UNIVERSAL TIME			LOCATION			IM- POR- TANCE	OBS. COND.	MEASUREMENTS			REMARKS	
		START	END	MAX. PHASE	APPROX. LAT.	MCMATH PLAQUE REGION	MEAS. AREA Sq. Deg.			MEAS. CORR AREA Sq. Deg.	MAX. WIDTH Ha	MAX. INT. %		
SACP	09	2219	2233	2224	N27	W27	7971	1-	C	1.17	*18	18		
SACP	09	2322	2346	2334	N25	W29	7971	1-	C	1.21	1.28	18		
LOCK	09	2324	2341	2330	N25	W30	7971	1-	C	*40	*40	20	H	
SACP	10	0000	E	0111 D	0014	N26	W27	7971	71 D	2	0.220	2.62	2.75	
MANI	10	0215	E	0231	0220	N25	W26	7971	1-		*20	*22	17	
ISTA	10	0810	E	0820	N27	W30	7971	1-						
KAND	10	0825	E	0850	0837	N26	W25	7971	16	3	11.00	2.80	3.30	F
CAPS	10	1058	E	1114	N25	W30	7971	1+	C	1.21	1.37	320		
SACP	10	1342	E	1409	1353	N26	W38	7971	1-	C	1353	*50	19	S
MEMA	10	1352	E	1354 D	2355	N29	W39	7971	1-	C	2351	*40	10	
LOCK	10	2349	E			N29	W33	7971						
HALE	11	0028	E	0039 D	0034	N25	W38	7971	9 D	1	0.034	*60	70	
SACP	11	0031	E	0040 D	0034	N25	W39	7971	1-	C	0.055	*20	2.47	
LOCK	11	0045	E	0103	0055	N40	E75	7983	1-	C	1453	*20	*40	D
MCMA	11	1451	E	1505 D	1453	N26	W50	7971	1-	C		*30		
SACP	12	1937	E	1948	1941	N21	E06	7981	1-	C	*43	*42	19	
HALE	13	2220	E	2245		N25	W80	7971	1-	C	2225	*20		
SACP	14	0020	E	0031	0022	N28	W81	7971	1-	C		*34	17	
HALE	14	0201	E	0208	0202	N28	W85	7971	1-	C	0.202	*20	H	
KAND	14	0955	E	1002 D	1432	N29	W88	7971	7 D	1				A
SACP	14	1408	E			S22	E73		1-	C		*25	17	
SACP	15	1939	E	1948	1943	N28	E80	7989	1-	C				
HALE	15	2002	E	2011	2006	N31	E77	7989	1-	C		*18	16	
SACP	15	2003	E	2012	2008	N31	E80	7989	1-	C	2008	*20	*40	
HALE	15	2257	E	2310 D	2305	N28	E78	7989	1-	C		*19	17	
SACP	15	2310	E									*45	16	
HALE	16	0153	E	0201	0155	N25	E23	7983	1-	C	0.155	*10		
HALE	16	0347	E	0351	0349	N25	E23	7983	1-	C	0.349	*10		
SACP	16	2056	E	2127	2108	N24	E16	7983	1-	C		*08	19	
MCMA	19	1340	E	1400 D	1345	N25	W62	7990	1-	C	1.345	*50		
SACP	19	2141	E	2148	2143	N26	W24	7983	1-	C		*94	17	S
HALE	19	2141	E	2156	2143	N25	W24	7983	1-	C	2143	*40	17	F
MCMA	19	2144	E	2150 D	2150	N26	W25	7983	1-	C	2145	*60	16	S
KAND	20	1347	E			N06	E75	7992	1-	C				
MCMA	20	2117	E	2140	2120	N04	E72	7992	1-	C	2120	*20	*60	
HALE	20	2119	E	2143	2121	N05	E70	7992	1-	C	2121	*20	*40	D
SACP	21	0026	E	0040	0033	N35	E56	7991	1-	C				
CAPS	21	1207	E	1215	1207	N27	W42	7983	8 D	1	1.209	2.00	160	BFG
MCMA	21	1207	E	1248 D	1207	N26	W43	7983	41 D	2	1208	2.00	2.80	BS
KAND	21	1325	E	1410	1410	N26	W44	7983	45 D	1	1.421	*80	1.10	EGH
MCMA	21	1419	E	1453	1421	N26	W43	7983	1442	1		1.20	21	S
SACP	21	1436	E	1451		N26	W44	7983	1-	C				

SOLAR FLARES

SEPTEMBER 1965

OBSERVATORY	DATE SEPT 1965	OBSERVED UNIVERSAL TIME			LOCATION	IM. POB. TANCE	OBS. COND.	TIME	MEAS. AREA Sq. Deg.	MEASUREMENTS	MAX. CORR. AREA Sq. Deg.	MAX. INT. Ha	REMARKS	
		START	END	MAX. PHASE				UT						
KANZ	21	1442 E	1502 D		N26 W44	7983	20 D	1		C 1947	*20	*30	10 L	EGH
LOCK	22	1937	2007	1947	S30 W35		1-							
MANI	23	0335	0351	0339	N28 W15	7995	1-	2	0339	*40	*40	*10		
MANI	23	0355	0405	0356	N28 W15	7995	1-	2	0356	*10				
WEND	23	0540	E 0637		N27 W21	7995	57 D	1+						
ISTIA	23	1302 E	1335		N28 W22	7995	25	1+						
MCMA	23	1540	E 1620		N26 W28	7995	1-	2	P 1306	*80	1.00		SL	
MCMA	23	1550 E	1602 D		N26 W28	7995	1-	2	C 1550	*30	*40		DT	
KANZ	23	1553 E	1602		N25 W21	7995	9 D	1-		S			D	DH
MCMA	23	1830	E 1910		N26 W28	7995	1-	2	C 1845	*50	*70		EH	
LOCK	23	2345	E 2412	2354	N25 W29	7995	1-	2	C 2354	*30	*30	10 L		
MANI	24	0344 E	0358 D	0347	N29 W28	7995	1-	2	0347	*20	*22			
WEND	24	0858 E	0909 D		N27 W36	7995	1-	2						HJ
WROC	24	0900 E	0915 D		N27 W38	7995	1-	2						
KAND	24	0900	E 0926		N24 W39	7995	26	1-						
WEND	24	0924 E	0942 D		N27 W32	7995	18 D	1-						
KAND	24	0926	E 0936		N25 W36	7995	10	1+						J
WROC	24	0927	E 0937		N25 W32	7995	1-	2						
KAND	24	0937	E 1002		N24 W40	7995	25	1+						
KANZ	24	0937 E	1003 D		N24 W37	7995	26 D	1-						
KANZ	24	1040 E	E 1110 D		N24 W38	7995	30 D	1-						
WROC	24	1040 E	E 1110		N25 W38	7995	30 D	1-						
HUAN	24	1443 E	1451		N28 W39	7995	1-	2						
SACP	26	1409	1421	1414	N21 E85	8005	1-							
SACP	26	1457 E	1511	1504	N21 E84	8005	1-							
HUAN	26	1637 E	1649		N19 E85	8005	1-							
HUAN	26	1654	E 1658		N19 E85	8005	1-							
SACP	26	1655	E 1701	1656	N21 E82	8005	1-							D
HALE	26	1713	E 1725	1716	N19 E87	8005	1-							18
SACP	26	1714	E 1719	D	N18 N20	E82	8005	1-						
HALE	26	1841	E 1847 D	1842	N19 E87	8005	1-							19
LOCK	26	2106	E 2115	2110	N20 E85	8005	1-							
HALE	26	2143	E 2151 D	2147	N33 W53	7989	1-	2	P 2147	*70	1.00		F	
SACP	28	1358	E 1414	1404	N23 E58	8005	1-							
MCMA	28	1858 E	1906 D		N21 E57	8005	1-							
MCMA	28	2016 E	2030 D		N21 E57	8005	1-							
MCMA	28	2058	E 2114 D		N21 E58	8005	1-							
HALE	29	0210	E 0236	0213	N21 E53	8005	1-							
HALE	29	0331	E 0403 D	0347	N21 E53	8005	1-	2	P 0347	*30	*90			
MANI	29	0344	E 0354		N19 E49	8005	1-							

SOLAR FLARES

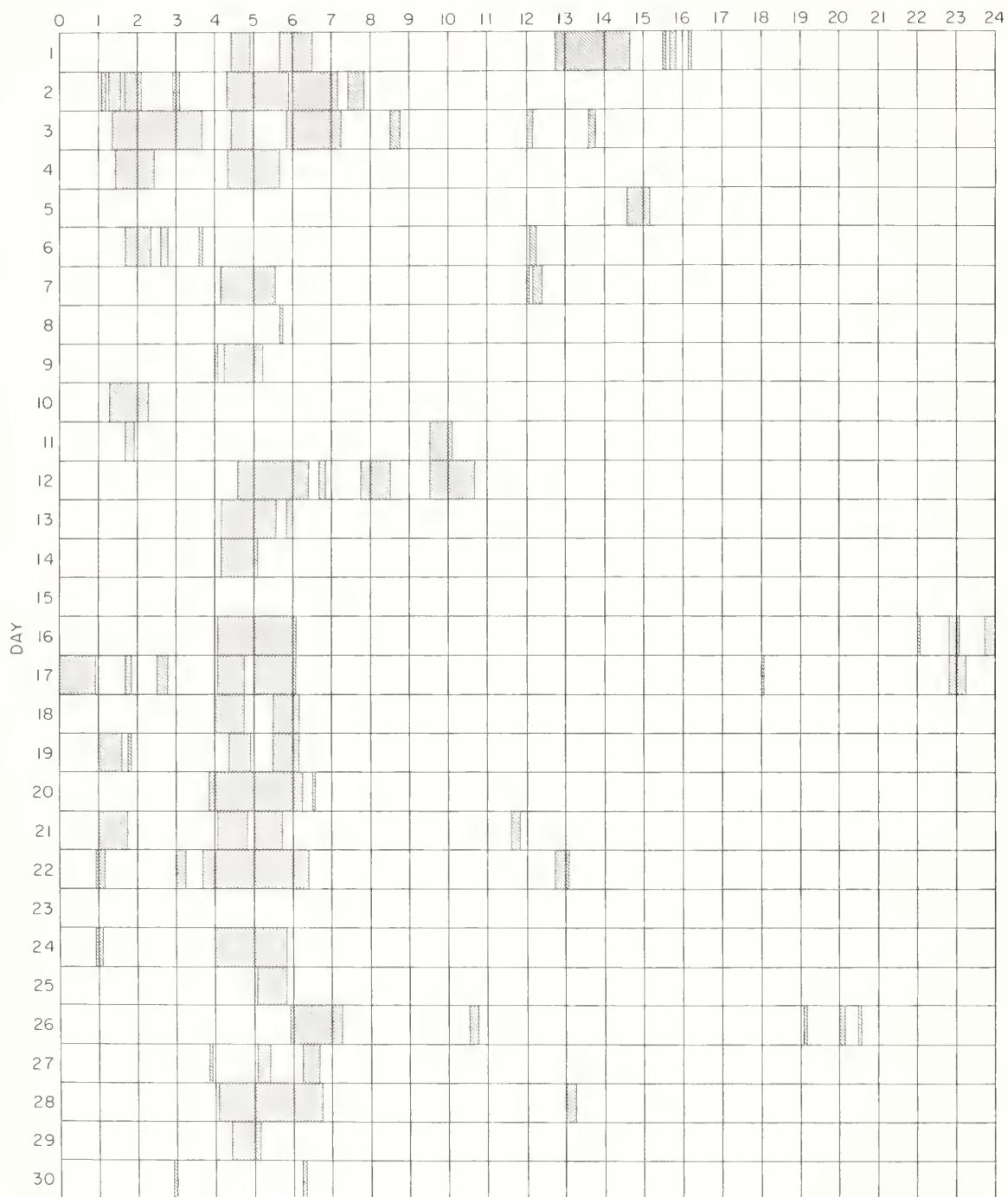
SEPTEMBER 1965

OBSERVATORY	DATE SEPT 1965	OBSERVED UNIVERSAL TIME			APPROX. LAT	APPROX. MER DIST	LOCATION MAGNETIC PIAGUE REGION	DURA- TION MINUTES	IM- POR- TANCE	OBS COND.	TIME UT	MEAS AREA Sq. Deg.	MEAS AREA Sq. Deg.	COOR. AREA Sq. Deg.	MAX WIDTH Ha	MAX INT %	REMARKS
		START	END	MAX PHASE													
WEND	29	1250 E	1256 D	S29 E46	8004			1-	2	C	1517	1.20	1.80				
WEND	29	1325 E	1331 D	N17 E50	8005			1-	2	C		1.53	1.83				17
MCMA	29	1500	1545	N22 E47	8005			1-	2	C		1.11	1.30				18
SACP	29	1507	1541	N20 E46	8005			1-	2	C		1.20	1.40				
SACP	29	1922	1929	N20 E43	8005			1-	3	C	1924	1.20	1.40				
HALE	29	1923	1935	N20 E43	8005			1-	2	C	2318	2.20	2.22				
MANI	29	2309 E	2343	N18 E36	8005			1-	2	C	2327	2.50	2.50				
LOCK	29	2316	2344	N20 E39	8005			1-	2	C	2325	1.60	1.80				20
HALE	29	2316	2347	N21 E39	8005			1-	2	C		1.20	1.35				F
SACP	29	2317	2340	N22 E39	8005			1-	2	C		1.20	1.35				17
SACP	29	2346	2351 D	N20 E39	8005			1-	2	C		1.52	1.58				17
HALE	29	2350	0016 D	N19 E39	8005			1-	1	P	2356	2.0	2.0				
MANI	29	2350	0013	N18 E35	8005			1-	2	P	2357	2.0	2.2				
SACP	30	0000	0040 D	N21 E40	8005			1-	2	P		1.03	1.16				17
MANI	30	0025	0031 E	N18 E35	8005			1-	2	P	0031	2.40	2.44				
HALE	30	0033 E	0048 D	N21 E40	8005			1-	1	P	0038	1.20	1.30				
HALE	30	0341	0402 D	N20 E35	8005			1-	1	P	0353	2.50	2.50				F
MANI	30	0342	0349 D	N20 E34	8005			1-	2	P	0348	2.50	2.56				
WROC	30	1010	0613 D	N19 E36	8005			1-	2	P	0540	1.10	1.20				J
MANI	30	0525	1100 D	N20 E38	8005			1-	1	P							
WROC	30	1020	1050	N20 E32	8005			1-	1	P							
CAPS	30	1240	1252	N21 E38	8005			1-	1	P	1243	2.0	2.30				175
SACP	30	1313 E	1504	N21 E32	8005			1-	2	P		5.26	5.60				25
OTTA	30	1319	1359	N22 E33	8005			1-	1	C	1344	2.33	2.52				F
KANZ	30	1320 E	1420	N20 E32	8005			1-	2	C							F
CAPS	30	1330	1353	N22 E38	8005			23	1	P	1340	2.60	3.40				180
MCMA	30	1353 E	1403 D	N22 E36	8005			10	1	P	1359	2.20	2.60				BF
KANZ	30	1425 E	1440 D	N21 E34	8005			15	1	D							
OTTA	30	1446	1452	N22 E36	8005			1-	2	C	1447	2.70	2.75				F
CAPS	30	1446	1504	N22 E38	8005			40	1	C	1448	1.00	1.30				182
SACP	30	1513	1653	N20 E32	8005			60	2	C		5.11	5.38				25
KANZ	30	1520 E	1545 D	N20 E29	8005			25	1	P	1555	2.50	3.10				E
CAPS	30	1525	1610	N19 E34	8005			45	1	P	1553	1.00	1.00				180
LOCK	30	1525 U	1705	N19 E27	8005			1-	1	C							F
KANZ	30	1545 E	1615 D	N21 E29	8005			30	2	P							20
LOCK	30	1920	1937	N19 E29	8005			58	1	C	1937	2.10	2.10				30
SACP	30	1921	2203	N21 E30	8005			162	2	C		5.80	6.09				25
KANZ	30	1924	2007	N21 E31	8005			43	1+	P							E
OTTA	30	1927 E	2023	N20 E29	8005			56	1+	P	1936	3.20	3.47				F
SACP	30	2256	2330	N20 E28	8005				1-	C		1.19	1.24				20
MANI	30	2257	2311	N18 E26	8005				2	P	2307	2.50	2.50				21
LOCK	30	2257	2328	N19 E27	8005			1-	1	C	2305	2.70	2.70				20
HALE	30	2301 E	2327	N20 E28	8005			80	1-	P	2304	2.80	2.80				F

**INTERVALS OF NO FLARE PATROL OBSERVATIONS
PROVISIONAL**

SEPTEMBER 1965

HOUR - UT



Observatories included:

Capri-S (Sweden)	Huancayo	Kanze lhohe	Meudon	Sacramento Peak	Wendelstein
Catania	Istanbul	Lockheed	Manila	Salonique	Wroclaw
Haleakala	Kandilli	McMath-Hulbert	Ottawa	Tortosa	

IONOSPHERIC EFFECTS OF SOLAR FLARES

111g

AUGUST 1965

AUG. 1965	UNIVERSAL TIME			TYPE SWF IMP	IMPORTANCE					BUR	WIDE SPREAD INDEX	STATIONS	KNOWN FLARE
	START	END	MAX		ABS	SCNA	SEA	SPA	SES				
01	1605	1610								1	4	BO MC	
01	1613	1617								1	4	BO MC	
02	1408	1411								1	4	MC BO	
03	1626	1628								1	4	MC BO	
03	2021	2023								1	5	BO MC HA	1930
03	2021	2034	2023							004	1	BO (WWV10-0.4°, WWV15-0.1°)	1930
03	2023	2025								1	5	BO MC HA	1930
04	1534	1536								1	4	MC BO	
04	2103	2105								1	5	BO MC HA	2102
08	1529	1625	1530		1						1	AR	
09	1416	1448								1	4	BO MC (SERIES OF BURSTS)	
09	1509	1513								1	4	BO MC	
09	1514	1517								1	4	BO MC	
09	1525	1532								1	4	BO MC	
10	1430	1540								1	4	MC BO (NOISE STORM)	
14	0346	0348								1	1	MA	
14	1735	1737								1	4	MC BO	*
15	0824	0832								1	1	RO	
18	1415	1602								1	5	MC BO RO (NOISE STORM)	
25	1501	1526								1	4	MC BO (SERIES OF BURSTS)	
31	2313	2320	2314							008	2	BO (KKE5-0.8°, KKE4-0.7°, WWV10-0.4°, WWV15-0.3°)	2310

AR = Arcetri, Italy

RIOMETER EVENTS

AUGUST 1965

GREAT WHALE RIVER

30 Mc/s

AUG. 1965	START UT	END UT	MAX UT	MAX. ABSORP. db, (tenths)	NO. OF PEAKS	AUG. 1965	START UT	END UT	MAX. UT	MAX. ABSORP. db, (tenths)	NO. OF PEAKS
1	2240	2326	2252	25	1	16	2204	-	-	1136	22
2	0622	2144	1138	12	6	17	-	-	6		
3	<0410*	2238	1249	14	1	18	-	0043	-	71	7
4	0110	1125	0715	9	1	18	0450	2330	1446		6
4	1626	2310	1905	13	2	19	0240	1110	0608	71	6
5	0302	0400	0313	6	1	19	1428	-	-		
5	1032	1620	1254	4	1	21	-	-	0348	42	26
5	2210	2344	2227	5	1	22	-	0040	-		
6	0332	0916	0706	6	2	22	1156	-	1300	10	1
7	0228	0924	0232	5	2	23	-	0130	-		
7	1826	-	-	14	4	23	1900	-	2058	33	14
8	-	0644	0330		8	24	-	1114	-		
8	2104	-	2328	8	2	24	2028	-	-	32	10
9	-	0033	-		25	-	1048	0453	-		
9	1454	2240	1817	12	1	25	1526	-	-	32	12
10	0432	1623	1448	7	3	26	-	2048	0347		
11	0034	1020	0211	40	6	27	0047	0120	0056	3	1
12	0118	1024	0646	14	2	27	0348	1740	1127		
12	2304	-	-	11	1	27	2156	-	2208	7	1
13	-	0140	0027		28	-	1157	-	-		
13	0906	1500	1114	12	1	29	0252	1344	0620	9	4
14	0056	2206	0336	18	7	29	2043	-	2105		
15	0556	1234	1111	8	1	30	-	1340	-	18	6
15	2018	-	2054	8	2	30	2000	-	-		
16	-	0234	-		31	-	2056	0423	-	43	5

* Equipment Failure - Event was in progress when trace was resumed at 0410.

**SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES**

IVa

SEPTEMBER 1965

ARO-OTTAWA
DRAO-PENTICTON

2800 Mc/s
2700 Mc/s

SEP. 1965	U R A N E	DESCRIPTIVE TYPE	START UT	DURATION HRS MIN	MEAN FLUX	MAXIMUM		REMARKS
						TIME	FLUX	
5	3	Simple 3	1208	1 23	1.8	Indet.	2.4	
6	5	Absorption	1905	0 23	0.6	1915	1.2	
7	3	Simple 3	1540	0 27	0.6	1554	1.2	
7	3	Simple 3	1820	2 10	0.8	1910	1.6	
8	3	Simple 3	2035	1 35	1.5	2105	3.0	
9	3	Simple 3	1425	0 25	0.3	Indet.	0.6	
9	3	Simple 3	1835	0 50	0.6	1843	1.2	
9	3	Simple 3	2353	0 42	0.8	Indet.	1.2	
26	1 4	Simple 1 Post B.I.	1714 1716	0 02 1 00	1.2 0.5	1715 --	2.4 1.0	
26	3	Simple 3	1900	2 00	0.4	2012	0.8	
29	3	Simple 3A	1508	0 47	1.0	1521	2.0	
1	1	Simple 1	1513.5	0 03	1.5	1515	3.0	
29	3	Simple 3	2120	0 40	1.0	2150	2.0	
30	3	Simple 3A	1210	5 20	4.0	1352	8.0	
30	3	Simple 3	1520	2 10	5.0	1602	9.0	
30	9 3	Precursor Simple 3	1830 1925	0 55 4 35	1.3 6.0	1942	2.6 12.0	

HOURS OF OBSERVATION, JULY, AUGUST, SEPTEMBER 1965

OBSERVING PERIOD:

July 1055 - 0140 UT
August 1100 - 0140 UT
September 1130 - 0130 UT

With the following exceptions:

(1) Observations commenced: July 18 at 1210 UT
22 at 1210
23 at 1210
24 at 1210
25 at 1230

August 3 at 1210
10 at 1210
14 at 1240
21 at 1220
25 at 1220

September 6 at 1235
9 at 1330
12 at 1225
13 at 1250
16 at 1210
19 at 1210
20 at 1210

(2) Interruption of observations, approximately 20 minutes in duration, for calibration purposes in the period 1400 to 1500 UT, September 1 to 31.

**SOLAR RADIO EMISSION
INTERFEROMETRIC OBSERVATIONS**

SEPTEMBER 1965

BOEING · SEATTLE

223 Me/s

SEPT. 1965	Type of Event	Start UT	End UT	Max UT	Flux Density at Time of Maximum $10^{-22} W_m^{-2} (cps)^{-1}$
2	Noise storm	2155*			
3		1630*	1815		
3	Noise storm	2235	0030*		
5	Noise storm	1630*	1715		
6	Noise storm	0000	0030*		
7	Noise storm	2200			
8				2110	
8	High continuum	2111			
9			1950		
9	Noise storm	1951	0030*		
10	Noise storm	1630*	0030*		
11	Noise storm	1630*	1830		
11	Series of bursts	2010	2150	2114.5	110
13	Minor burst	2336.8	2338.4	2337.5	15

* Noise storm in progress

The equipment was down from September 15, 1940 UT to September 16, 1730 UT and on September 29, 1910 UT - 1915 UT.

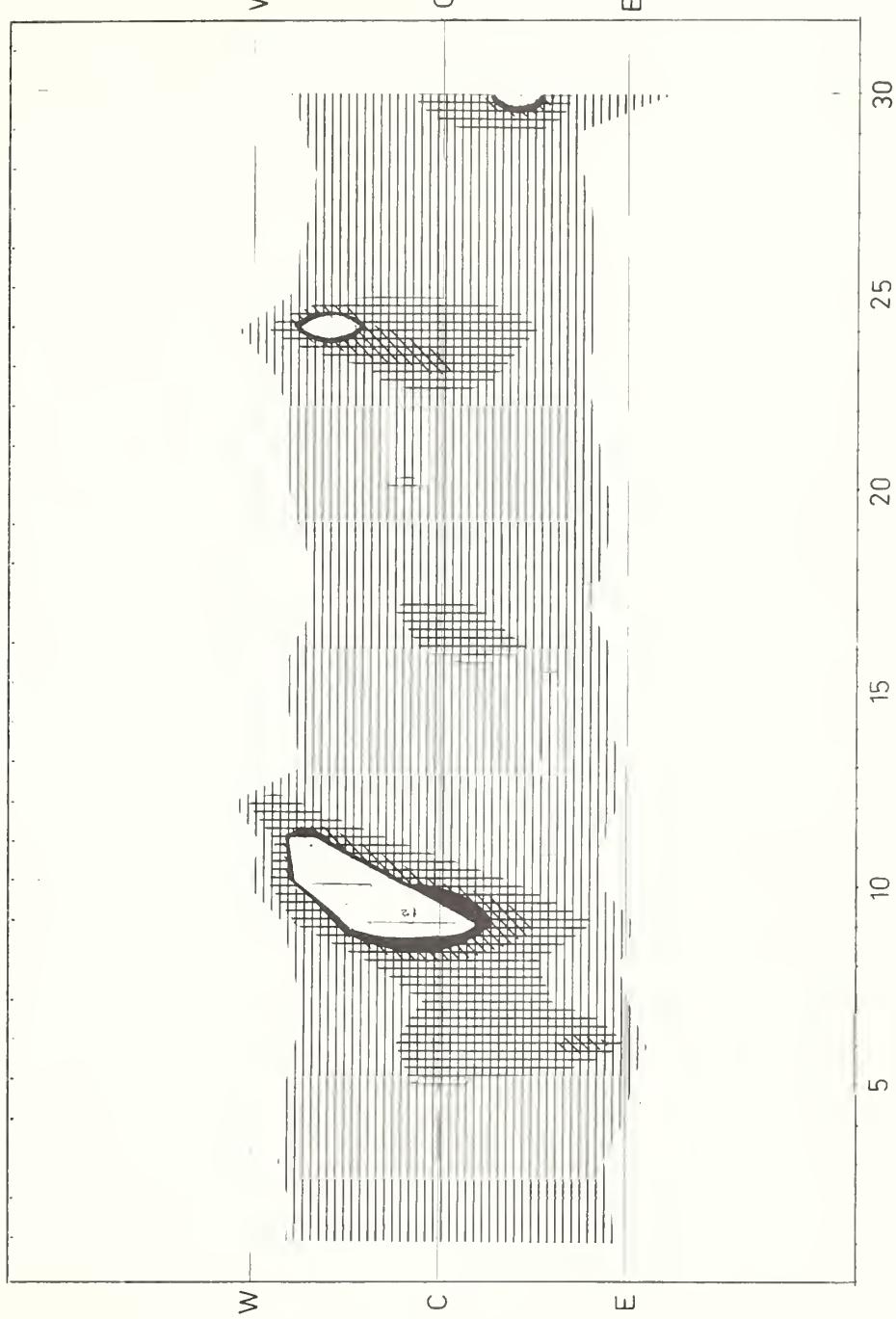
Normal observing hours were from 1630 UT to 0030 UT.

SOLAR RADIO EMISSION
INTERFEROMETRIC OBSERVATIONS

NANÇAY

SEPTEMBER 1965

169 Mc/s



**SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES**

SEPTEMBER 1965

NBS BOULDER

108 Mcs

SEPT. 1965	TYPE	START UT	TIME OF MAXIMUM UT	DURATION MINUTES	INTENSITY
6	3	2057.8	2057.9	1.6	3
8	6	1410	2150	655D	1
9	6	1240E	1813	744D	1
10	6	1241E	1350	134D	1
11	6	1315	1453	274	2

NOMINAL TIMES OF OBSERVATION

SEPTEMBER 1965

NBS BOULDER

108 Mcs

SEPT. 1965	HOURS OF OBSERVATION U.T.	HOURS OF INTERFERENCE U.T.	SEPT. 1965	HOURS OF OBSERVATION U.T.	HOURS OF INTERFERENCE U.T.
1	1232-0116		13	1244-0058	
2	1233-0114		14	1245-0056	
3	1234-0112	1820-1847; 1923-2015	15	1246-0054	
			16	1247-0053	
			17	1247-0051	
4	1235-0110	1854-2135; 2340-0036	18	1248-0049	
			19	1249-0048	
5	1236-0110	2145-2320	20	1250-0046	
6	1237-0108		21	1251-0044	
7	1238-0106	2053-2121; 2210-0054	22	1252-0043	
8	1239-0105		23	1253-1710	
			24	2143-0039	
9	1240-1455; 1615-0104		25	1255-0038	2315-0038
			26	1256-0036	
10	1241-1815; 2315-0103		27	1257-0034	
11	1242-0101	2253-2313; 0002-0101	28	1258-0033	1850-0033
			29	1259-0031	
12	1243-0059		30	1300-0030	

Most of the interference was due to atmospherics.

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

IVe

SEPTEMBER 1965

HALEAKALA

107 Mc/s

SEPT. 1965	TYPE	START UT	TIME OF MAXIMUM UT	DURATION MINUTES	INTENSITY
4	6	0230	0240	118D	1
6	3	2058	2058.5	2.0	2
8	6	1610E	2155	745D	1
9	6	1611E	1813	743D	1
11	6	1611E	1713	96D	2
12	6	0027	0145	241D	2

Normal observing hours are from sunrise to sunset which for September is on the average from 1612UT to 0428UT.

No observations were made on September 13, 1730 - 1940 UT
30, 1715 - 1930 UT

SOLAR RADIO EMISSION SPECTRAL OBSERVATIONS

SEPTEMBER 1965

High Altitude Observatory Boulder

7.6 - 41 Me/s

Date Sep 1965	Bursts			Frequency Range (Mc/s)	Date Sep 1965	Bursts			Frequency Range (Mc/s)
	Type	Time (U.T.)	Inten- sity			Type	Time (U.T.)	Inten- sity	
2 Sep 6	no observ.	1400-1457		Frequency Range (Mc/s)	9 Sep	III	0027-0027:15	1	27-38
		1542:30-1543:15	1			III	1418:30-1418:45	1-	21-38
		1752:15-1752:30	2			III	1427:15-1427:30	1-	25-36
		1752:45-1753	2			III	1428-1428:15	1	21-40
		1850:45-1851	1-			III	1431:45-1432	1-	23-36
		1935-1935:45	1			III	1432:45-1433	1-	27-35
		1936:15-1937	2			III	1438-1438:30	1	23-39
		1938-1938:30	2			III	1439:45-1440	1-	28-41
		1939:15-1940	2			III	1443:30-1443:45	1	23-36
		2001:15-2001:45	1+			III	1444:15-1444:45	1	23-36
	no observ.	2030:30-2031	2			III	1447-1447:15	1	25-38
		2056:30-2057	2			III	1447:45-1448	1	24-38
		2058-2058:30	2			III	1450-1450:30	1	26-37
		2059-2059:30	2			III	1452:30-1453:15	1	25-36
		2320:30-2321:15	2+			III	1454:30-1454:45	1-	26-38
		2321:30-2322:15	2+			III	1510:30-1510:45	1-	24-33
		2333:15-2334	2+			III	1512:15-1512:30	1-	23-38
		0019:30-0020	2			III	1515:15-1516	1-	23-33
		1311-1311:45	1			III	1517:15-1517:30	1-	24-38
		1537:45-1538	1-			III	1519-1519:15	1-	21-37
7	no observ.	1731:45-1732:15	1	Frequency Range (Mc/s)	9 Sep	III	1521:45-1522	1	19-41
		1957:30-1958:30	1-			III	1526:45-1527:15	1	21-35
		1400-1800				III	1534:15-1534:45	1	22-41
		1822:15-1822:30	1-			III	1536:15-1536:45	1	24-34
		1823-1823:15	1-			III	1554:15-1554:30	1-	26-41
		1841:30-1841:45	1-			III	1559:30-1559:45	1-	26-41
		1843:15-1843:45	1-			III	1600:30-1600:45	1-	26-36
		1847:45-1848	1-			III	1603:30-1603:45	1-	30-37
		1848:45-1849	1-			III	1606:30-1607:30	1+	10-41
		1900:45-1901:15	1			III	1614-1614:15	1-	19-22
	no observ.	1902:45-1903	1-	Frequency Range (Mc/s)	9 Sep	III	1616-1616:15	1	22-36
		1917-1917:30	1			III	1619-1619:30	1-	19-41
		1959-1959:15	1-			III	1626-1626:15	1-	24-36
		2022-2022:30	1+			III	1626:45-1627	2	19-41
		2023:45-2024:15	1+			III	1627-1628:45	2	12-41
		2024:30-2025	1+			III	1629:30-1629:45	1+	22-36
		2059-2059:30	1			III	1702:30-1703	1	25-37
		2104-2104:30	1-			III	1707:45-1708:15	1	16-38
8	no observ.	2108-2108:30	1	Frequency Range (Mc/s)	9 Sep	III	1723:30-1723:45	1-	26-34
		2132:30-2133	1-			III	1724:15-1724:30	1-	26-35
		2135:15-2135:45	1			III	1725:30-1726	1-	26-33
		2138:45-2139:15	1-			III	1729:15-1729:45	1-	26-40
		2140:30-2141	1-			no observ.	1730-2100		
	no observ.	2142:45-2143:15	1	Frequency Range (Mc/s)	9 Sep	III	2103-2103:30	1	24-38
		2145:15-2145:45	1			III	2103:45-2104	1-	21-41
		2233:15-2233:45	1			III	2104:15-2104:45	1+	16-41
		2243:15-2243:45	1+			III	2110:30-2110:45	1-	23-41
		2320:30-2321	1+			III	2206:45-2207	1-	26-35
9	no observ.	2329:45-2330	1	Frequency Range (Mc/s)	9 Sep	III	2241-2241:15	1	17-38
		2330:30-2330:45	1-			III	2252:15-2252:45	1	24-41

**SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS**

IVg

SEPTEMBER 1965

**High Altitude Observatory
Boulder**

7.6-41 Mcs

Date Sep 1965	Bursts			Frequency Range (Mc/s)	Date Sep 1965	Bursts			Frequency Range (Mc/s)
	Type	Time (U.T.)	Inten- sity			Type	Time (U.T.)	Inten- sity	
cont. 9 Sep	III	2253-2253:15	1	16-41	10 Sep	III	2345:15-2345:30	1-	23-41
	III	2316-2316:15	1-	24-41		III	2349:15-2351:15	2	13-41
	III	2316:30-2317:15	2	18-41	11	III	0004:15-0004:45	1	13-41
	III	2345-2345:30	1+	18-41		no observ.	1400-1948		
	III	2345:45-2346:15	1	18-41		III	2242:30-2243	1-	26-36
10	III	2354:15-2354:30	1-	20-38	12	III	1640:30-1640:45	1-	27-33
	III	0000:30-0000:45	1-	25-41		III	1719:45-1720	1-	1 ^c -41
	III	0005-0005:15	1-	22-41		III	1720:15-1724:30	3	7.6-41
	III	0006-0006:15	1-	32-39		III	1725-1725:45	2	15-41
	III	0006:30-0006:45	1-	29-41		III	1732:30-1732:45	1	25-41
	III	1417:15-1417:30	1-	24-41		III	1929:30-1929:45	1-	22-36
	III	1417:45-1418:15	1-	18-41		III	2005:30-2006	1-	11-32
	III	1435:15-1436:30	1-	17-41		III	2008:45-2009:45	1	10-41
	III	1513:30-1513:45	1-	21-41		III	2121:45-2122	1-	23-37
	III	1516:45-1517	1-	31-36		III	2157:15-2157:30	1-	26-37
	III	1524:45-1525:15	1-	19-35	13	III	2325-2325:30	1-	26-41
	III	1544:30-1545	1-	12-41		no observ.	1434-1618		
	III	1545:30-1546	2	12-41		III	2222-2222:30	1-	18-41
	III	1559:30-1600:45	3	10-41		III	2224:15-2224:30	1-	15-41
	III	1605:15-1605:45	1+	18-41		III	2308-2308:30	1	16-41
	III	1632:30-1633	1	18-41		III	2309:30-2309:45	1-	24-41
	III	1636:15-1636:30	1-	24-41		III	2336:30-2337:30	1	13-41
	III	1708:45-1709:30	1-	23-41		III	2337:45-2339	2	11-41
	III	1737:30-1737:45	1-	25-41		III	2340:30-2340:45	1-	24-41
	III	1740-1741	1+	8-41	14	III	0020-0020:45	2	16-41
	III	1745:45-1746	1-	26-41		III	0022-0022:30	1+	16-41
	III	1926-1926:45	2	12-41		III	0022:45-0023	1+	16-41
	III	2005:30-2006:15	1-	26-41		III	1431:15-1431:30	1-	22-36
	III	2033-2033:15	1-	26-41		no observ.	1536-1643		
	III	2034:30-2034:45	1-	25-41		III	2054:30-2055	1	19-41
	III	2056:30-2056:45	1-	27-37	15	no observ.	1630-2000		
	III	2059-2101:45	1	22-41	16	III	1737:30-1738:15	1-	16-41
	III	2110-2110:45	2	19-41		no observ.	1755-2207		
	III	2113:15-2113:30	1-	19-35	17	no observ.	2023-2135		
	III	2115:15-2115:45	1	19-41	20	no observ.	1609-1632		
	III	2238:15-2238:30	1	18-37	24	III	1632:30-1633:30	2	17-41
	III	2239:15-2239:45	1+	16-41	25	III	2230:15-2231	1	27-41
	III	2240-2242	2	11-41		III	2240:45-2242	1+	22-41
	III	2322:45-2323	1-	28-41	30	III	1906:45-1907:15	1	18-41
	III	2324:30-2324:45	1-	24-41					

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SOLAR RADIO EMISSION SPECTROHELIograms

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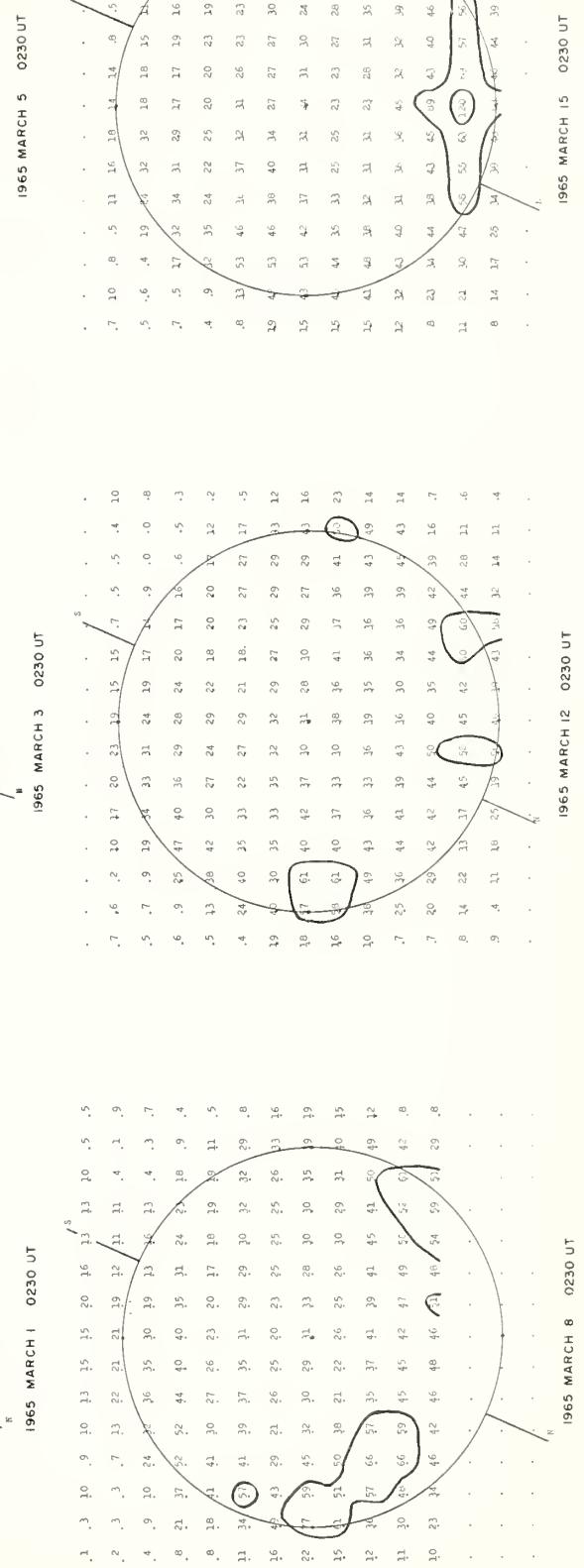
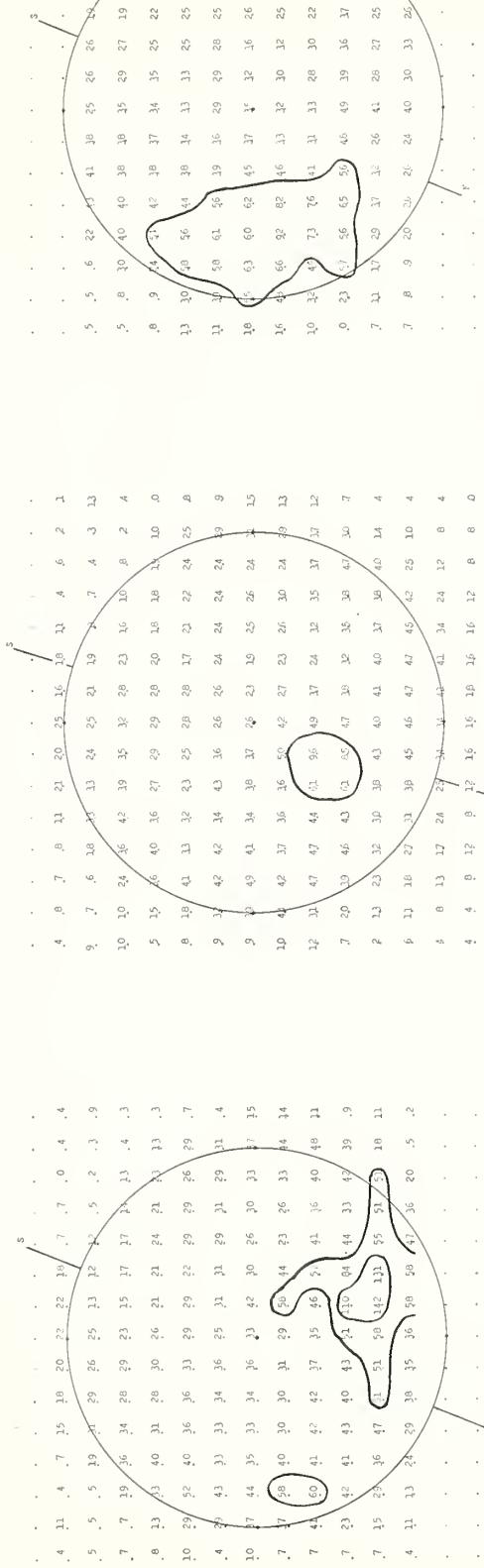
10

SOLAR RADIO EMISSION SPECTROHELIograms

FLEURS, AUSTRALIA

MARCH 1965

21 cm
Resolution: about 3 minutes of arc.
Unit of Brightness temperature: 1700°K



1965 MARCH 8 0230 UT

1965 MARCH 12 0230 UT

1965 MARCH 15 0230 UT

IV 3

SOLAR RADIO EMISSION SPECTROHELIOPHOTOGRAMS

FLEURS, AUSTRALIA

MARCH 1965

21 cm
Resolution about 3 minutes of arc.
Unit of Brightness temperature: 1700°K



1965 MARCH 19 0230 UT

1965 MARCH 21 0230 UT

1965 MARCH 22 0230 UT

1965 MARCH 24 0230 UT

1965 MARCH 26 0230 UT



1965 MARCH 19 0230 UT

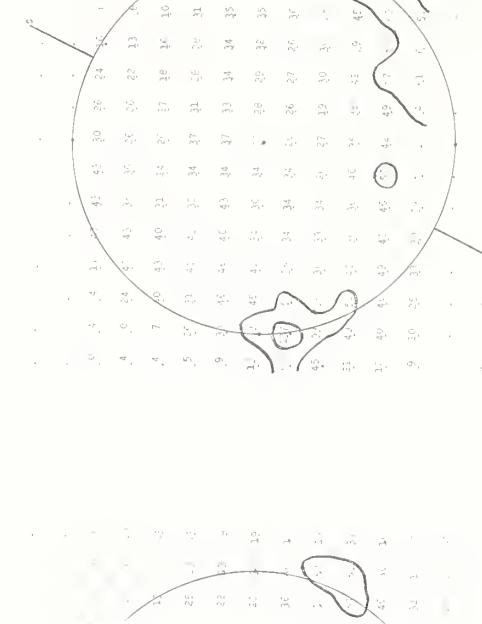
1965 MARCH 24 0230 UT



1965 MARCH 24 0230 UT



1965 MARCH 26 0230 UT



1965 MARCH 21 0230 UT



1965 MARCH 22 0230 UT



1965 MARCH 24 0230 UT



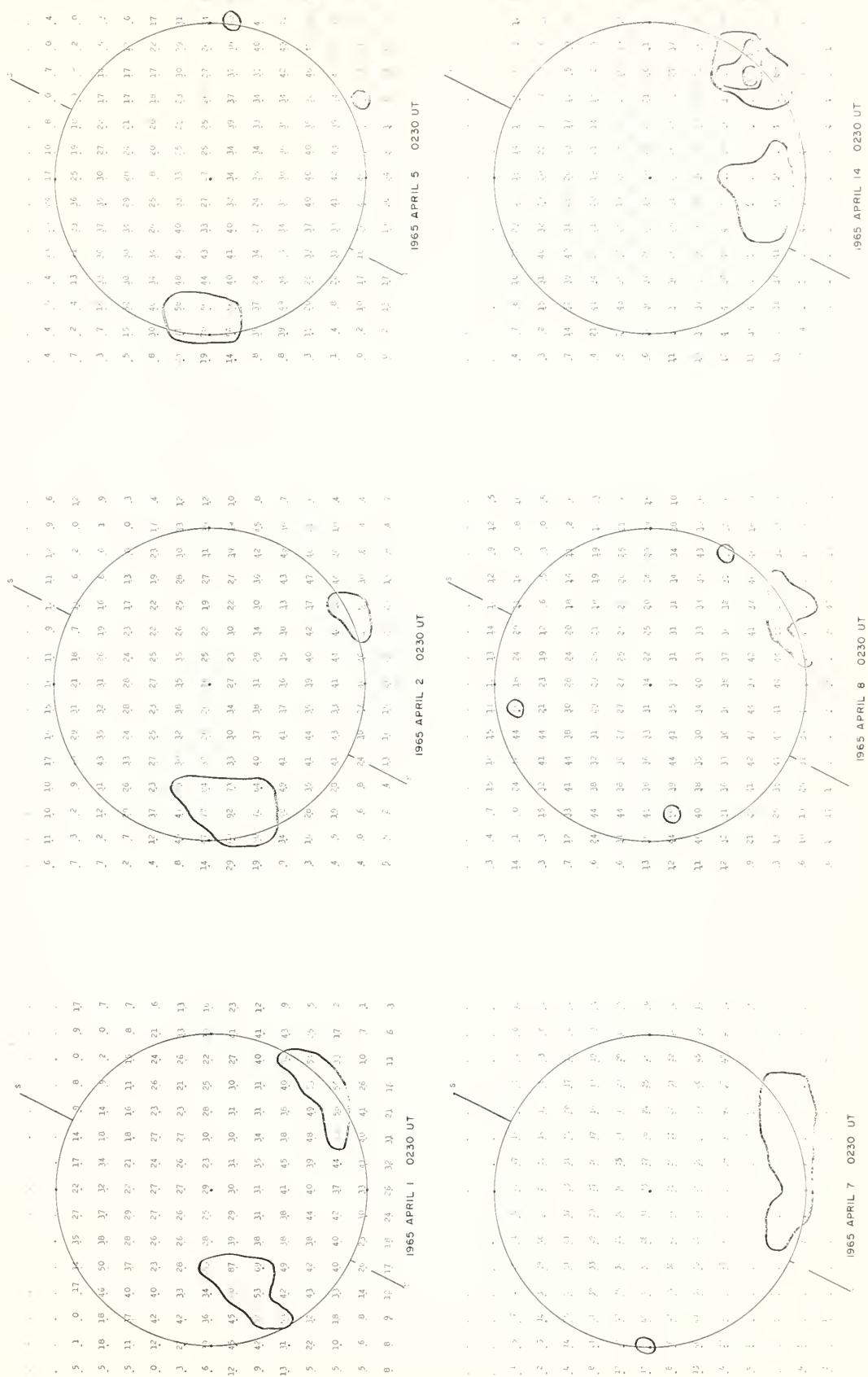
1965 MARCH 26 0230 UT

SOLAR RADIO EMISSION SPECTROHELIOPHOTOGRAMS

FLEURS, AUSTRALIA

APRIL 1965

21 cm
Resolution: about 3 minutes of arc.
Unit of Brightness temperature: 1700°K

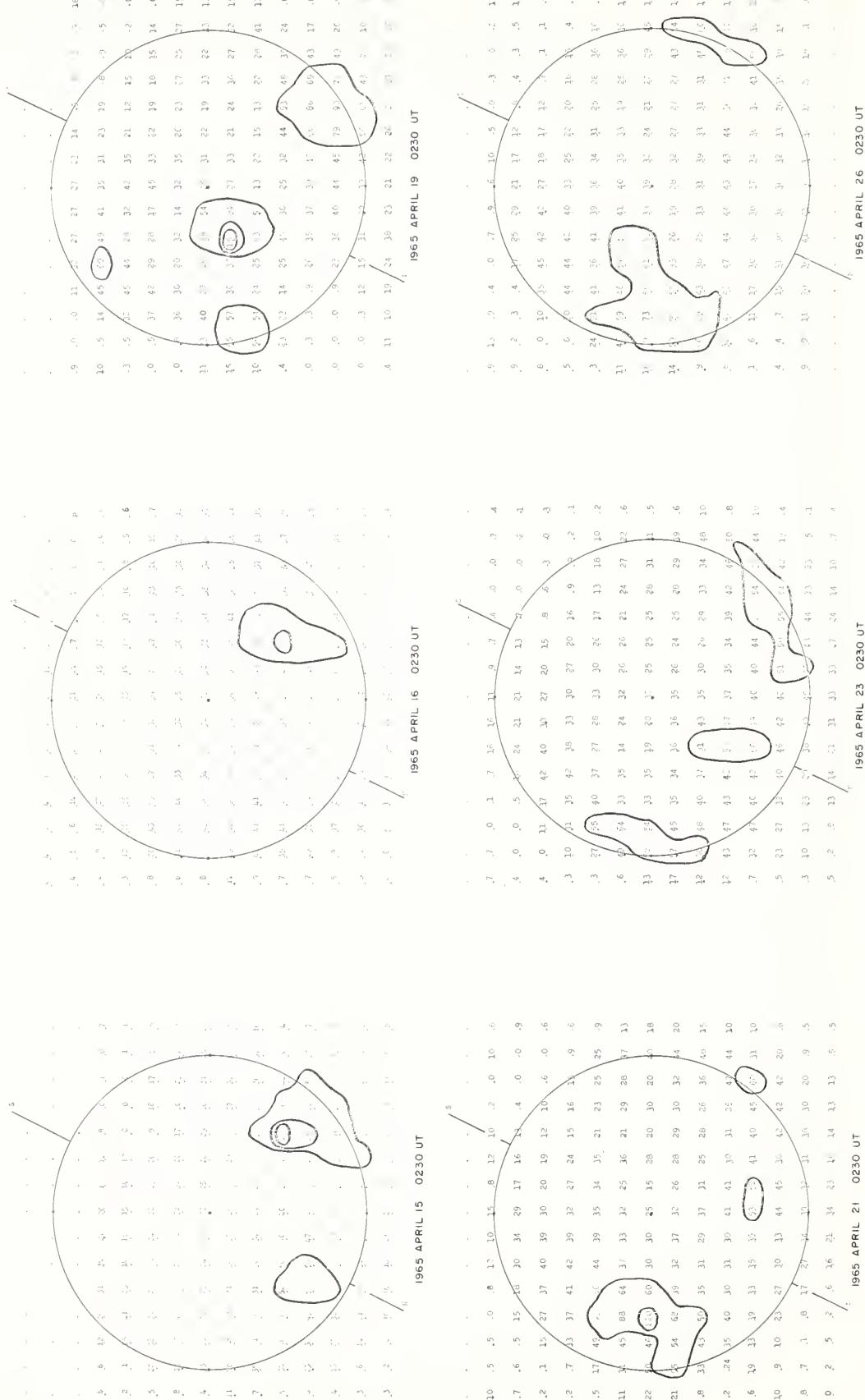


SOLAR RADIO EMISSION SPECTROHELIograms

FLEURS, AUSTRALIA

APRIL 1965

Resolution: about 3 minutes of arc.
Unit of Brightness temperature: 1700°K

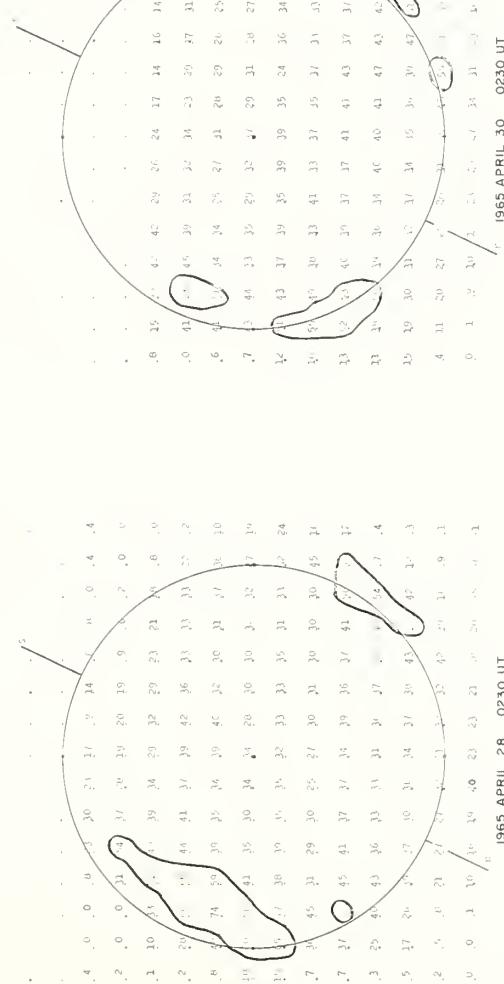


SOLAR RADIO EMISSION SPECTROHELIograms

FLEURS, AUSTRALIA

APRIL 1965

Resolution about 3 minutes of arc.
Unit of Brightness temperature, 1700°K



21 cm

Resolution about 3 minutes of arc.
Unit of Brightness temperature, 1700°K

COSMIC RAY INDICES

(Neutron Monitors)

AUGUST 1965

AUG. 1965	CHURCHILL		CLIMAX		DALLAS	
	DAILY AVERAGE		DAILY AVERAGE		DAILY AVERAGE	
	COUNTS	PER HOUR	COUNTS	PER HOUR	COUNTS	PER HOUR
1	6488.8	(20)	3312.2		6427.6	
2	6493.3		3317.2		6443.1	
3	6508.5		3325.1		6468.5	
4	6518.6		3330.8		6455.8	
5	6515.9	(22)	3331.5		6442.4	
6	6531.3	(20)	3340.5		6450.7	
7	6535.2		3331.7		6429.1	
8	6518.2		3324.7		6428.8	
9	6518.5		3327.9		6436.8	
10	6522.8		3327.1		6441.6	
11	6529.6		3330.8		6456.0	
12	6523.4		3329.0		6463.0	
13	6538.7		3338.0		6457.6	
14	6559.6		3342.8		6455.6	
15	6541.5		3333.5		6436.7	
16	6460.9		3281.1		6352.8	
17	6480.2		3303.0		6393.3	
18	6496.1		3308.1		6408.4	
19	6474.5		3307.5		6402.1	
20	6481.3		3311.4		6409.6	
21	6476.4		3321.6		6424.9	
22	6464.5		3301.8		6392.0	
23	6492.3		3305.3		6381.5	
24	6466.4		3302.4		6363.2	
25	6470.2		3303.9		6370.9	
26	6474.0		3300.8		6377.8	
27	6465.2		3301.9		6378.8	
28	6469.0		3308.6		6390.9	
29	6500.0		3317.6		6392.3	
30	6505.3		3322.9 (30)		6401.1 (20)	
31	6503.9		3315.5		6395.8 (23)	

() Number of hours for which data are available if less than 24 (or number of section hours if less than 40 for Climax).

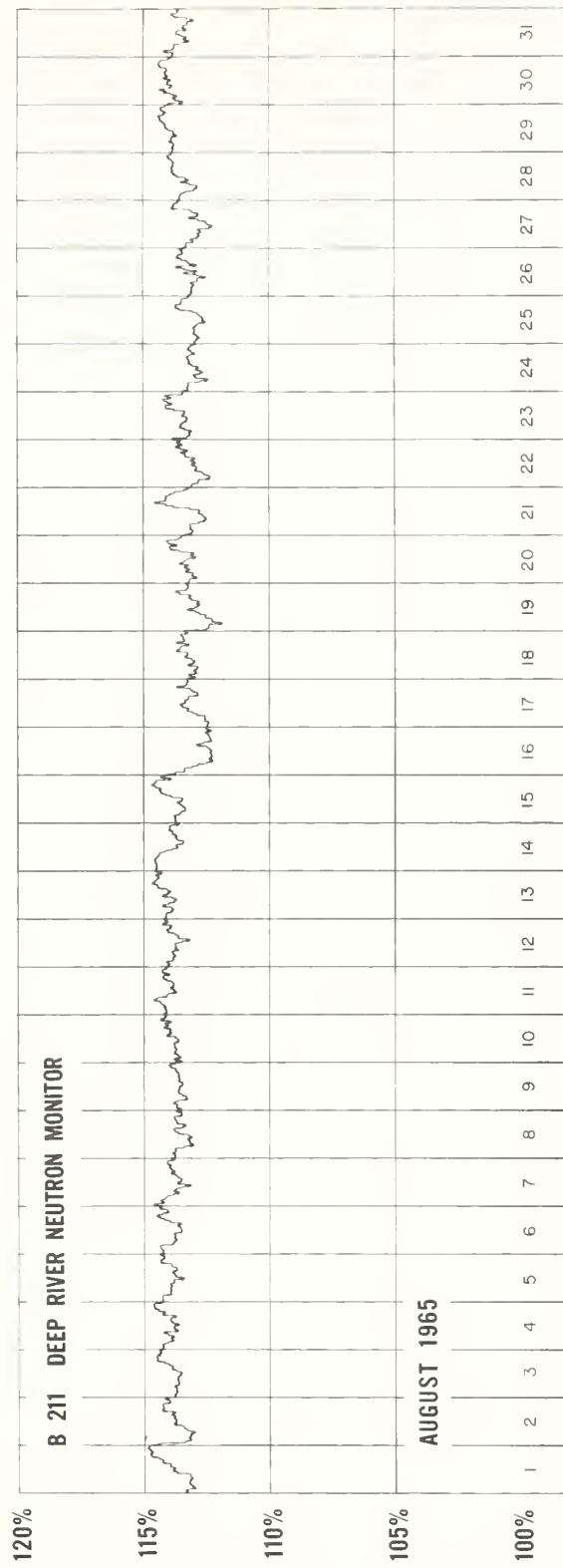
Churchill Super Neutron Monitor, Scaling Factor 120.

Climax IGC Station B305, Scaling Factor 128.

Dallas Super Neutron Monitor, Scaling Factor 120.

COSMIC RAY INDICES

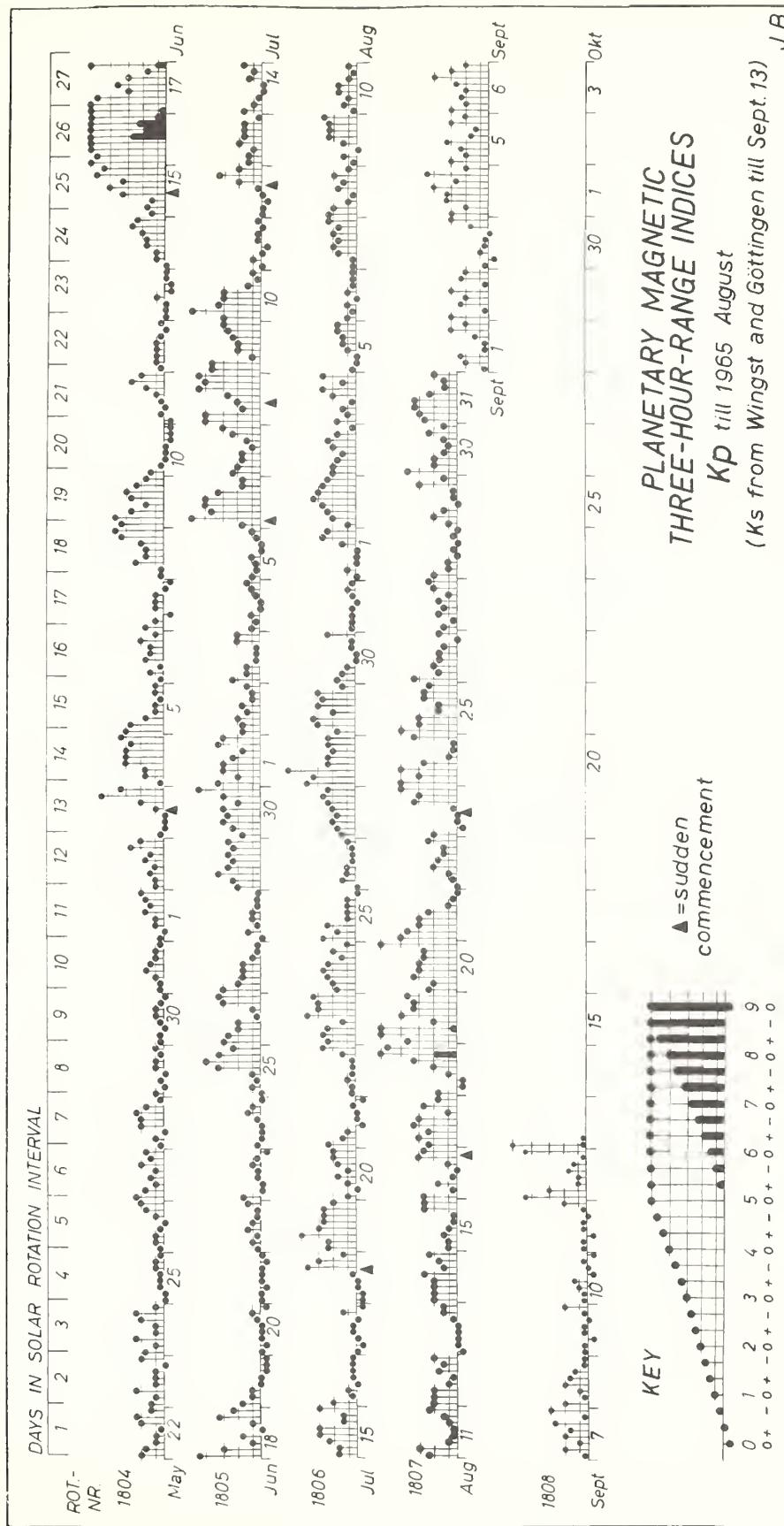
(Pressure Corrected Hourly Totals)



GEOMAGNETIC ACTIVITY INDICES

AUGUST 1965

August 1965	C	Values Kp								Sum	Ap	Final Selected Days	
		Three	hour	Gr.	interval	1	2	3	4	5	6	7	8
1	0.3	0+	1o	0+	0+	0+	1+	3-	2+	9-	5	Five	
2	0.8	1o	2o	2+	3-	3+	3o	3-	2+	19+	11	Quiet	
3	0.5	2o	2o	2-	1+	2o	2+	2-	1-	14-	6		
4	0.6	2-	1o	1+	1-	2o	3-	1+	3-	13+	7	5	
5	0.1	1-	0+	0+	1o	1+	1+	2-	2-	8+	4	6	
												10	
6	0.1	1o	1-	1o	0+	1o	1-	1-	1-	6o	3	13	
7	0.4	1-	1-	2-	2o	2-	2o	2-	2+	13-	6	28	
8	0.5	2+	2o	1o	1-	2-	1+	2o	1o	12o	6		
9	0.5	1-	1+	0+	1+	2+	2+	2+	3-	13+	7		
10	0.2	1-	1+	1o	2-	2-	1o	1-	1o	9o	4		
11	0.5	2+	3o	1o	1-	1-	1o	1+	2+	12+	6	Five	
12	0.4	2o	2o	2o	1o	1-	2-	1+	2o	13-	6	Disturbed	
13	0.0	0o	0+	0+	0+	0+	1-	1+	1+	5-	3	18	
14	0.6	2o	2o	2o	2o	3-	1+	2-	2+	16o	8	19	
15	0.4	1o	1o	1+	1o	1-	1-	3-	3-	11o	6	20	
												24	
16	0.4	3-	1-	2-	1-	0+	1o	3o	3-	13-	7	25	
17	0.7	2+	3o	2+	3+	3o	1o	3-	2-	19+	11		
18	1.0	2-	0o	0o	1o	2o	3+	6+	5-	19o	21		
19	1.4	4-	5o	5+	2o	4o	3+	3+	4-	30+	27		
20	1.2	2+	2o	3+	3o	3o	3-	3-	5o	24o	17		
21	0.8	4o	4-	3o	3o	2+	1o	1-	0+	18o	12	Ten	
22	0.3	0+	1-	1o	2o	2-	1+	1+	2+	11-	5	Quiet	
23	0.5	2o	0o	0+	0+	1-	3+	3o	4o	14-	9		
24	0.9	4o	3o	4o	3-	1o	1-	1-	3+	19+	14	1	
25	0.8	4o	3o	3o	2-	2-	3-	3-	2+	21o	13	5	
												6	
26	0.5	3+	2-	2o	2-	2-	1+	0+	2-	14-	7	10	
27	0.4	1+	1-	2-	1+	2-	1o	2o	2+	12o	6	13	
28	0.0	2o	1o	1o	0+	1-	0+	1-	0+	6+	3	15	
29	0.3	1o	2o	1+	0+	1-	1-	3o	1+	10+	6	22	
30	0.6	4-	2o	2o	1+	1o	1+	2+	1+	15o	8	27	
31	0.7	3-	3o	3+	3+	2+	1+	1+	2o	19+	11	28	
												29	
Mean:		0.53									Mean:	9	



NORTH ATLANTIC, NORTH PACIFIC

AUGUST 1965

AUG. 1965	WHOLE DAY INDICES			NORTH ATLANTIC				NORTH PACIFIC				GEOMAGNETIC INDICES					
				6-HOURLY QUALITY FIGURES		SHORT-TERM FORECASTS ISSUED ABOUT ONE HOUR IN ADVANCE OF		6-HOURLY QUALITY FIGURES		K _{FR}		A _{FR}		K _{SI}			
	NORTH ATLANTIC	NORTH PACIFIC	AVERAGE HIGH LATITUDE	WHOLE DAY	00 TD D6	06 TD D6	12 TD D6	18 TD D6	00 TD D6	06 TD D6	12 TD D6	18 TD D6	HALF DAY (1)	DB-SERVED (2)	PRE-DICTED (1)	HALF DAY (2)	
01	7-	5	6	7	7-	6+	6+	7-	7	6	7	7	5	5	6	6	
02	7-	5	6	6	7-	6+	7-	7-	6	6	7	6	3	3	13	11	
03	6+	6	6	6	7-	5o	6+	7-	6	6	7	7	5	5	15	2	
04	6+	6	6	6	6o	6-	7-	7-	7	6	7	7	2	1	6	13	
05	6+	6	6	6	6+	6o	7-	7-	7	6	7	7	1	1	5	12	
06	6+	6	6	6	6+	6+	6+	7-	7	6	7	7	1	1	3	10	
07	7-	6	6	6	6+	6-	7-	7o	7	6	7	7	2	2	7	6	
08	7-	6	6	7	7-	7-	7o	7o	7	6	7	7	2	1	6	5	
09	7-	6	6	7	7-	6+	7-	7o	7	6	7	7	2	2	7	3	
10	6o	6	6	7	6+	5+	6+	7-	6	6	7	7	2	2	6	3	
11	7-	6	6	7	6+	6+	7-	7-	6	6	7	7	2	2	8	7	
12	6+	6	6	7	6+	5-	7o	7-	6	6	7	7	2	2	8	3	
13	7-	6	6	7	7-	6o	7-	7o	6	6	7	7	0	1	3	3	
14	6+	6	6	7	6+	6-	7-	7-	7	6	7	7	2	2	8	5	
15	6+	6	6	6	6+	5+	7o	7o	7	6	7	7	1	2	6	7	
16	6+	6	6	6	6o	6-	7-	7o	6	6	7	7	2	2	7	7	
17	6+	6	6	7	6+	6o	7-	7-	6	6	7	7	3	2	8	5	
18	6+	6	6	7	6+	6o	7-	6+	6	6	7	7	0	(4)	13	5	
19	6o	6	6	6	6-	9o	7-	7-	5	4	6	6	(4)	3	22	9	
20	6o	6	6	6	6o	5o	6+	7-	6	5	7	7	3	3	17	7	
21	6-	6	6	6	6-	4-	6+	7-	6	5	7	7	7	1	13	5	
22	6+	6	6	7	6o	6o	7-	7-	6	5	7	7	1	2	5	5	
23	7-	6	6	7	6+	6o	7-	7-	6	6	7	7	1	3	9	7	
24	6-	6	6	6	6-	4+	6+	6+	6	5	6	6	(4)	2	16	13	
25	6-	6	6	6	6-	4+	7-	7o	6	4	6	7	3	2	12	11	
26	6+	6	6	6	6o	5+	7o	7o	6	5	7	7	3	1	8	7	
27	6-	6	6	6	6o	4+	6+	6+	6	6	7	7	1	2	5	3	
28	6+	6	6	6	6o	6-	7-	7o	6	6	7	7	1	1	2	4	
29	7-	6	6	6	7-	6o	7-	7-	6	6	7	7	2	2	8	13	
30	6+	6	6	6	7-	5o	7-	7-	6	5	7	7	3	1	9	9	
31	6+	6	6	6	6-	6-	7-	7-	6	5	7	7	3	1	8	7	
QUIET				P	19	19 19 22 26											
				S	12	12 8 9 5											
				U	0	0 0 0 0											
				F	0	0 0 0 0											
DISTURBED				P	0	0 1 0 0											
				S	0	0 2 0 0											
				U	0	0 0 0 0											
				F	0	0 1 0 0											

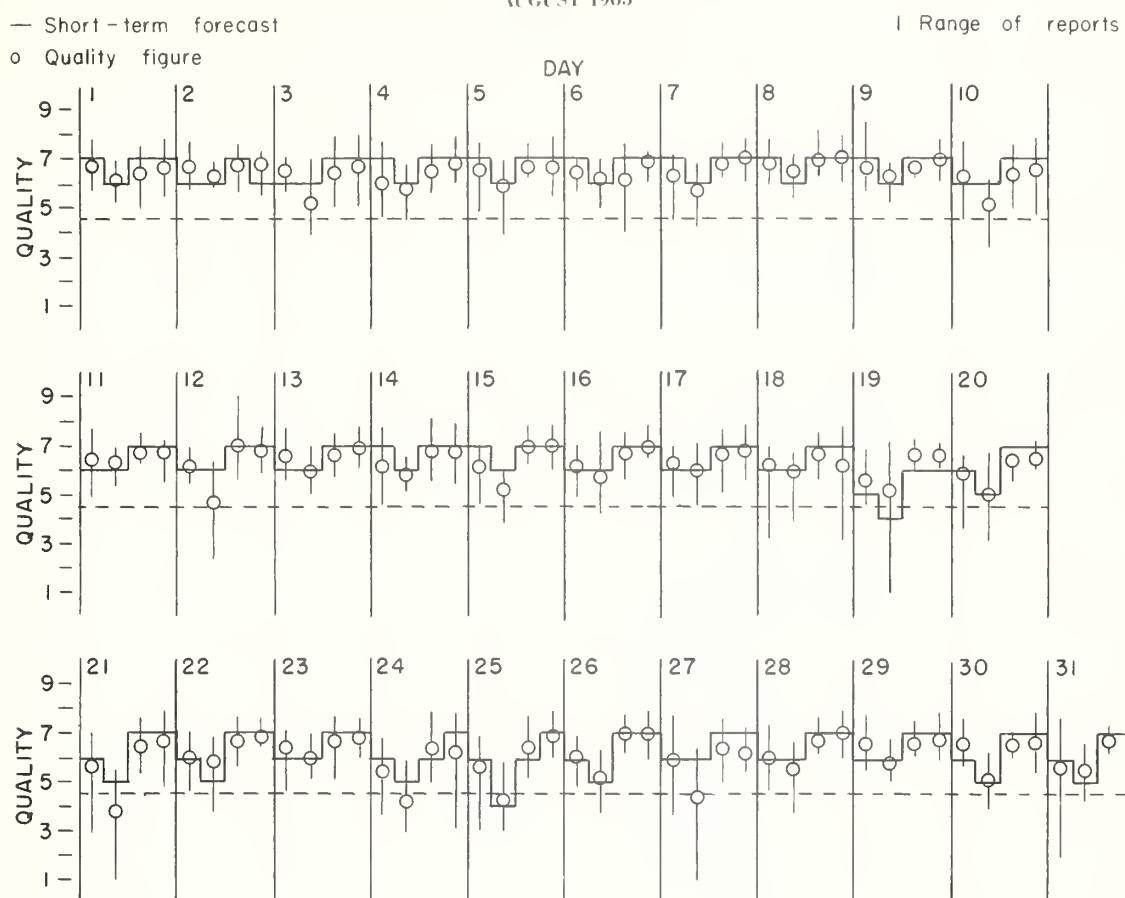
1) THE ADVANCE Jc-FORECASTS ARE SCORED AGAINST THE AVERAGE HIGH LATITUDE WHOLE-DAY INDICES.

2) THE OBSERVED INDICES FOR THE NORTH PACIFIC ARE LOW WEIGHT BECAUSE OF INSUFFICIENT DATA AVAILABLE FOR THEIR PREPARATION.

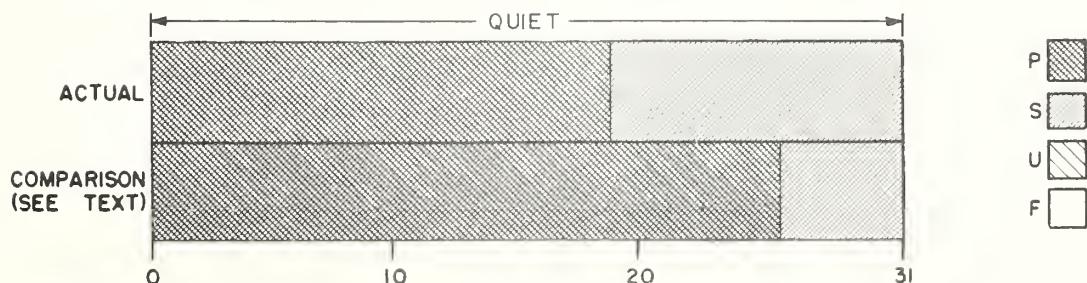
3) THE PREDICTED A_{FR} INDICES ARE ISSUED EACH WEDNESDAY FOR THE COMING SEVEN DAYS. THE VALUE FOR THE FIRST DAY OF EACH PREDICTION PERIOD IS UNDERSCORED.

NORTH ATLANTIC

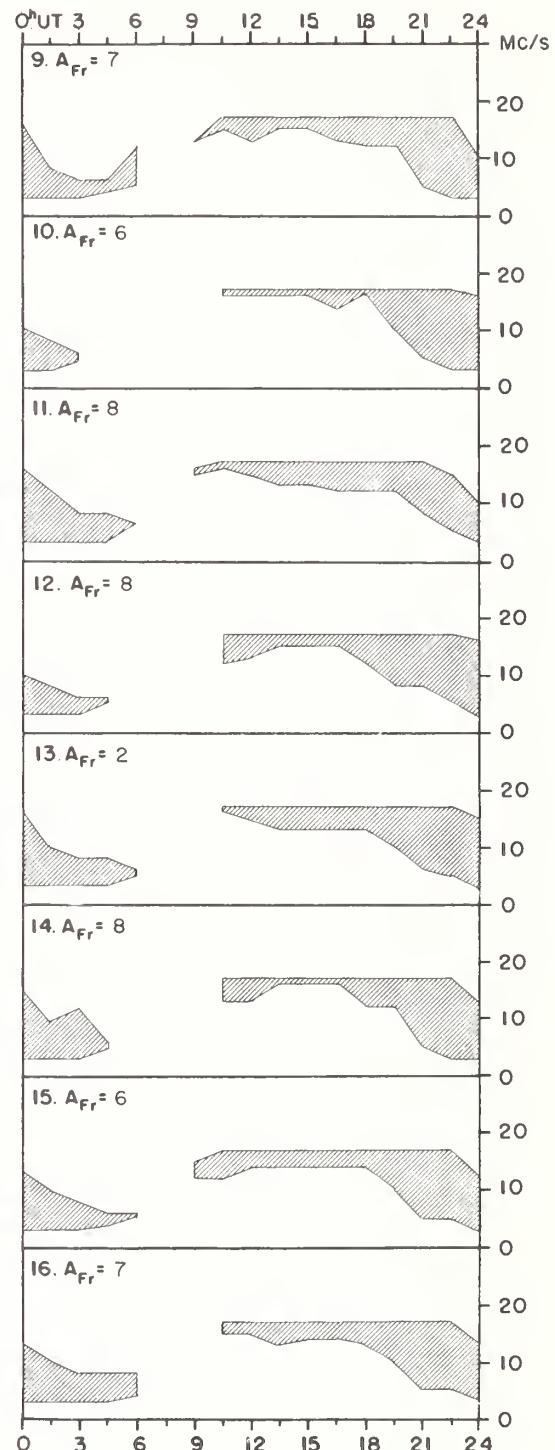
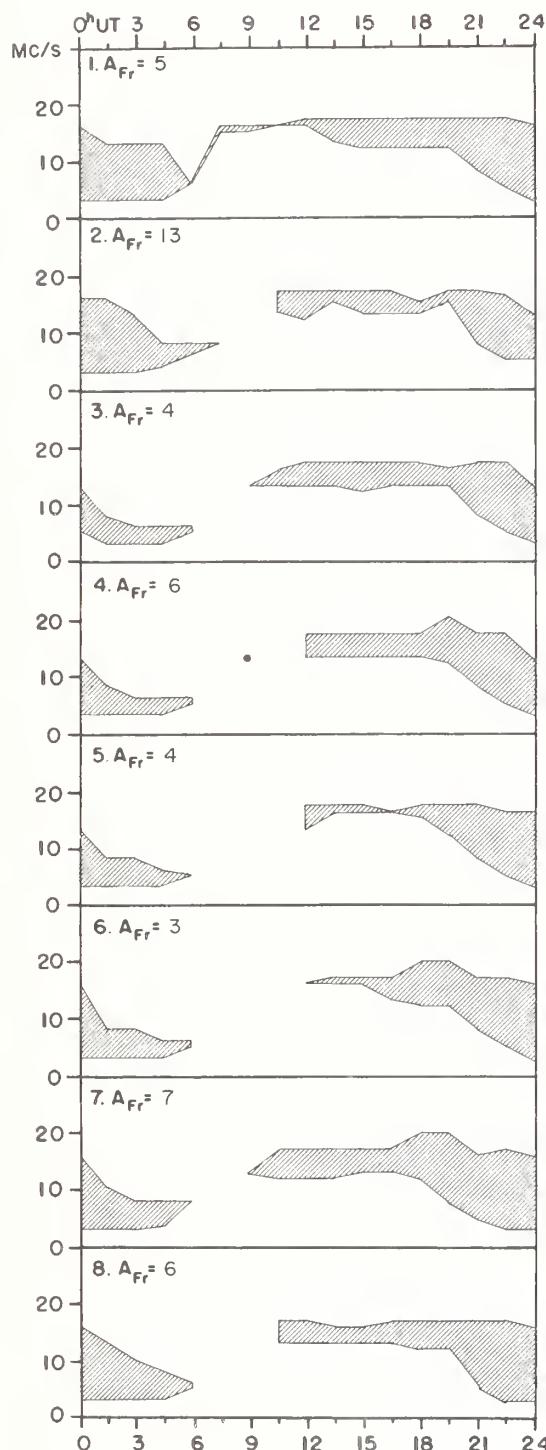
AUGUST 1965



HIGH LATITUDE



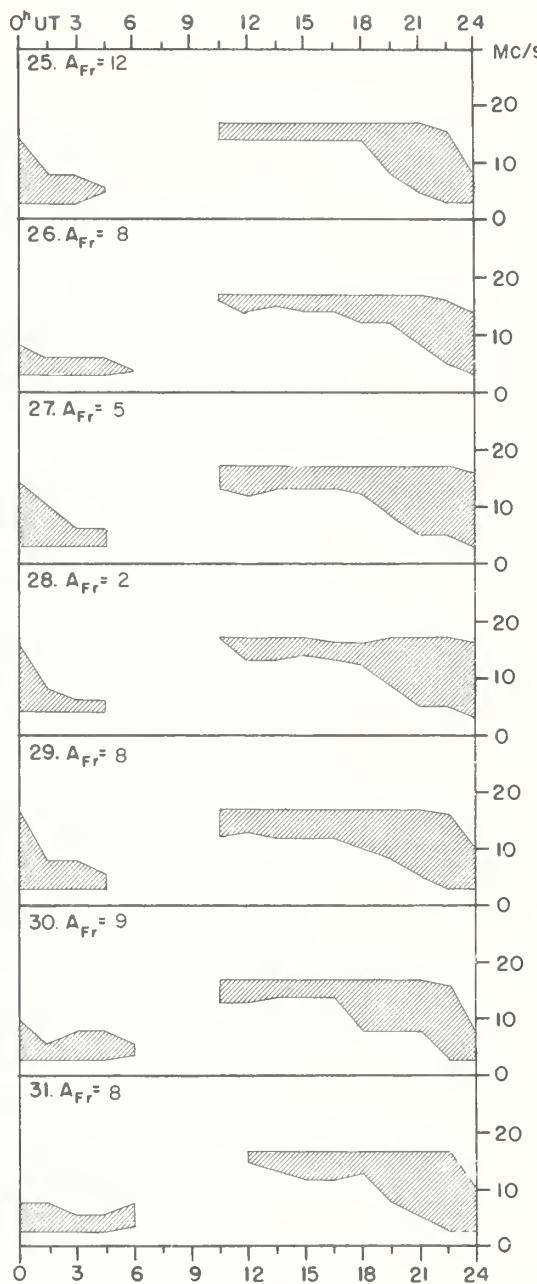
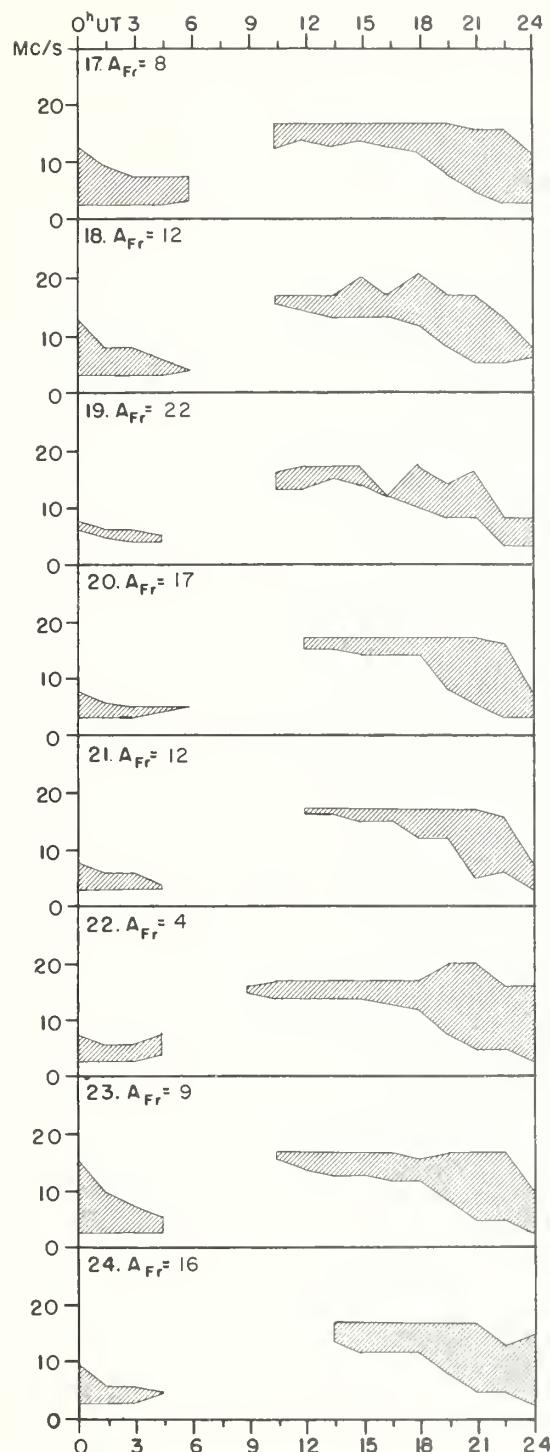
AUGUST 1965



USEFUL FREQUENCY RANGES -- NORTH ATLANTIC PATH

VIIId

AUGUST 1965



Adapted from Observations by Deutsches Bundespost

IQSY ALERT PERIODS

INTERNATIONAL URSIGRAM
AND WORLD DAYS SERVICE

SEPTEMBER 1965

SEPT 1965	TIME OF ISSUE UT	ADVANCE GEOPHYSICAL ALERT	WORLDWIDE GEOPHYSICAL ALERT			
			NO	TYPE	TIMING	ELABORATION
1	0400		224	Solar Activity	Exists	Flares
5	1830	Ottawa, Solar Flare 05/1209				
10	1505	Anacapri, Solar Flare 10/1058	225	Solar Activity	Exists	East Limb
27	0400		226	Solar Activity	Exists	
28	0150	AGIWARN, Magnetic Storm 27/1655	227	Solar Activity	Exists	Beta Gamma Spot
	0400		228	Solar Activity	Exists	
29	0400					
30	0400					
	1613	Sac Peak, Solar Flare 30/1549				

